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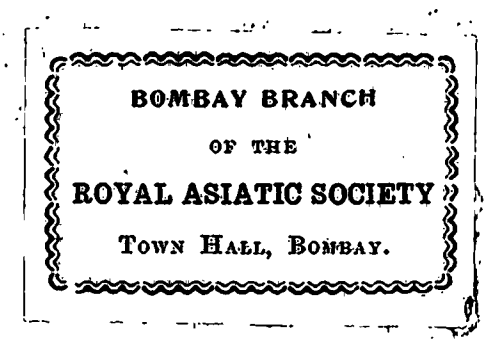

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REPORT

ON

THE MEDICAL TOPOGRAPHY AND STATISTICS

OF

THE PRESIDENCY DIVISION OF THE MADRAS ARMY,

INCLUDING

Fort St. George, and its Dependencies,

WITHIN THE LIMITS OF THE

SUPREME COURT.

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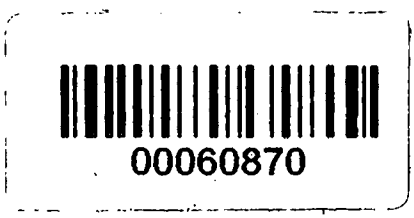

PRESIDENCY DIVISION.

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PREFATORY REMARKS BY THE MEDICAL BOARD.

The Supreme Government having called upon the Medical Board for information on the Medical Topography of India, they consider a few preliminary observations necessary in order to explain the circumstances under which the reports for this Presidency have been drawn up, and the cause of the delay experienced in carrying into effect the orders of Government in a satisfactory manner.

The records of the Medical Board Office were known to contain a large and valuable collection of topographical and statistical information, but the various documents were so incomplete as to render it necessary to make a further reference to the Medical Officers of the Establishment. Every Medical Officer throughout the country was, accordingly, required to furnish a report of the District, Station, or Cantonment in which he then served, or of any other with which he was best acquainted.

The additional documents thus procured were, however, still so defective that a series of complete reports by individual Medical Officers, could not be selected for publication. The Medical Board, therefore, with a view to fulfil the wishes of Government, propose to compile from the whole of the records at their disposal, a general Topographical and Statistical account of each of the Military Divisions of this Presidency, to be comprised in ten numbers. The proposed series will also include a report on the hill countries of Coorg and the Neilgherries, as well as one on the Tenasserim provinces and the Eastern settlements.

In preparing the reports for the Press it was necessary to alter and modify the language and arrangement of the original text considerably. But care has been taken to give the opinions of the authors on professional points, as nearly in their own words as possible. Hence a diversity of style, and certain defects and inaccuracies, arising from these causes, may probably be observed.

Tables of *Disease* and *Mortality*, both of the Civil and Military departments, for Europeans and Natives, will be annexed to the reports. This part of the work, drawn up from returns in the Medical Board Office will be found to contain much valuable information.

In drawing up the reports for publication, it was, in some instances, difficult to avoid repetitions. This was more especially the case with those of the Southern, Mysore, and Canara Divisions in which the same information may be found in more than one of the reports. But it will be seen that such repetitions could not be avoided without rendering some of them imperfect.

The time of the Secretary to the Medical Board, on whom the duty of preparing the reports devolved, being much occupied with the ordinary business of his office, it became requisite to employ an assistant in arranging the work for publication;—Dr. Lorimer, Garrison Assistant Surgeon of Fort St. George, was accordingly selected for that purpose; and it is but justice to state, that notwithstanding his other professional avocations he has for the last three years zealously afforded his gratuitous aid to the Secretary,—and the numerous tables of diseases already alluded to, were framed by Dr. Lorimer,—a labour in itself of no ordinary magnitude.

In conclusion the Medical Board acknowledge their obligations to Mr. Chamier, Chief Secretary, for several valuable reports and other papers containing much statistical and

general information. They are also indebted to Lieutenant Colonel Strahan, Quarter Master General of the Army for the comprehensive map of Southern India prefixed to the Presidency report, which was prepared by his order expressly for this work.

By order,

GEORGE PEARSE, M. D.

Secretary Medical Board.

Fort St. George,
MEDICAL BOARD OFFICE.
15th November, 1842.

INTRODUCTION.

The Madras Presidency comprises the southern and eastern portions of the peninsula of India. In figure it is somewhat triangular, and lies between the 8th and 22nd degrees of North latitude, and the 75th and 85th degrees of East longitude. It includes the dominions of the Rajah of Nagpore,—of the Nizam or Soobah of the Deccan,—of the Rajah of Mysore, and those of some other native chiefs of smaller extent. Its greatest length and breadth are respectively, about 800 and 450 miles, forming an area computed at 290,000 square miles. On the North, or base of the triangle, it is bounded by Hindostan proper,—on the South, at Cape Comorin, by the Indian Ocean and Gulf of Manaar, —on the East, by the Bay of Bengal,—and on the West by the Indian Ocean and the Bombay Presidency.

The general aspect of the country on the eastern coast, is that of a level sandy plain, with hills rising at the distance of from 30 to 60 miles inland, which form the line of eastern Ghauts, and run south-westerly in an oblique direction from Ganjam to Cape Comorin. A similar chain of mountains called the western Ghauts, runs along the west coast, from the Concan in the Bombay Presidency to Cape Comorin, where they unite with the eastern range. The western range is within the average distance of about half a degree from the sea, though occasionally it approaches much nearer to the coast. The ascent to these hills is so remarkably abrupt, particularly from the coast side, as to render them nearly inaccessible, except at a few natural openings or defiles which will be more particularly described hereafter. In this range is situated the celebrated Neilgherries or Blue Mountains of Coimbatore, and the elevated country of Coorg.

The centre of the peninsula includes the Table lands of

Mysore, a country having a mean average height of 3,000 feet;—the Ceded Districts, an irregularly mountainous country with a mean height of 1,600 feet above the sea;—the Deccan or Hyderabad country, (abounding with hills and rocks, of primitive formation,) the average elevation of which is 1,900 feet;—and Berar, in which is included the country of Nagpore, having numerous fertile alluvial plains, with large tracts of unreclaimed and uninhabited jungle, and ranges of barren mountains, of moderate elevation.

The peninsula of India being situated within the tropics, the territories it comprises are necessarily exposed to high solar temperature. The heat, however, is, in many situations, very considerably mitigated by elevation and proximity to the sea. These regions are also exposed to the influence of the periodical winds or monsoons, which greatly modify the heat and moisture incident to the climate.

The monsoons are called the North-east and South-west, and are attended by the periodical rains; the former, which exerts its influence chiefly on the eastern coast, commences usually in October, and continues till December, when the rains cease, and the wind becomes dry and parching. The South-west monsoon which begins in May, continues till August or September, and is felt chiefly on the Malabar coast and western parts of the country. At other seasons of the year the winds are variable, but for the most part southerly, from March till May, i. e., from the termination of one monsoon, till the commencement of the other. A more particular account of the climate will be found in the reports of the several divisions and stations.

The Madras presidency with the exception of the settlements eastward of the Bay of Bengal, includes the following military sub-divisions, viz. the Presidency Division,—the Centre do.—the Southern do.—the Provinces of Malabar and Canara,—the Mysore Division,—the Ceded Districts,—the Northern Division,—the Hyderabad do.—and the Nagpore Division.

The boundaries and relative situation of each may be traced on the annexed map. The diseases peculiar to the various parts of the country will be particularly noticed in the several divisional reports; for, the varieties of climate to be met with produce, as might be expected, a corresponding difference in the nature and character of the prevailing diseases.

The following Table of diseases exhibits at one view, the total of admissions into hospital,—the nature of the diseases, and the number of deaths for a period of ten years for Europeans and Natives; and therefore affords data for comparing the influence of climate on both, as well as the relative healthiness of the several divisions of the Army.

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Plan
of the
TOWN of MADRAS
and its Limits

A MAP
of
SOUTHERN INDIA
Shewing the MILITARY DIVISIONS of the
ARMY
the COLLECTORATES, ZILLAHS
and
the principal Stations
CIVIL and MILITARY
throughout the
MADRAS PRESIDENCY.
Compiled in the
Quarter Master General's Office
FORT SAINT GEORGE.
BOMBAY
NAGPORE
HYDERABAD
MYSORE
MADRAS
PONDICHERRY
CALICUT
COCHIN
TRAVANCORE

General Table exhibiting the total number of Admissions and Deaths in the Madras Army, during a period of ten years from 1829 to 1838.

EUROPEAN TROOPS. Aggregate Strength 103,431.	Admissions and Deaths.	Diseases. Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	" continued.	" intermittent.	" remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis.	Thoracic diseases.	Ulcer phagedenic.	Wounds and Injuries.	Other complaints.
Total Admissions	166,865	205	105	61	2,533	845	3,262	8,069	17,442	0	2,195	16,826	13,964	4,536	55	11,251	274	1	7,049	10,687	12	21,450	6,696	25	14,630	45,266
Total Deaths	4,725	115	59	16	770	1	54	159	1,382	0	6	203	134	153	0	545	18	0	6	93	2	63	316	2	53	509
Average Annual percentage of Sick to Strength	180 ·636	·498	·192	·056	2 ·739	·817	3 ·154	7 ·801	16 ·863	0	2 ·122	16 ·270	12 ·824	4 ·192	·053	10 ·877	·264	0	6 ·815	10 ·332	·011	20 ·738	6 ·473	·024	14 ·144	43 ·764
Average Annual percentage of Deaths to Sick	2 ·828	57 ·560	28 ·301	26 ·229	27 ·179	·118	1 ·654	1 ·970	7 ·923	0	·364	1 ·206	1 ·010	3 ·528	0	4 ·844	6 ·569	0	·089	·870	16 ·666	·293	4 ·719	8 ·0	·362	1 ·322
Average Annual percentage of Deaths to Strength	4 ·568	·114	·029	·015	·744		·052	·153	1 ·336		·007	·196	·129	·147		·526	·017		·085	·089	·001	·060	305	·001	·051	·579
NATIVE TROOPS. Aggregate Strength, 568,403.																										
Total Admissions	347,327	148	926	1,804	5,346	12,991	101	9,010	5,506	12	29,444	4,702	95,354	8,046	1,012	487	716	17	7,221	22,214	415	11,697	4,998	52	25,843	92,251
Total Deaths	9,121	102	180	209	2,413	10	8	453	587	1	138	246	1,383	361	2	62	30	1	15	443	42	91	503	7	138	1,569
Average Annual percentage of Sick to Strength	61 ·105	·026	·162	·317	·940	2 ·285	·017	1 ·585	·968	·002	5 ·180	·826	16 ·775	1 ·415	·178	·085	·126	·002	1 ·270	3 ·130	·073	2 ·050	·879	·009	4 ·546	16 ·225
Average Annual percentage of Deaths to Sick	2 ·625	68 ·918	19 ·438	13 ·068	45 ·136	·076	7 ·920	5 ·027	10 ·661	8 ·333	·456	5 ·176	1 ·448	4 ·486	·107	12 ·731	5 ·431	5 ·882	·207	1 ·946	10 ·120	·780	11 ·864	13 ·461	·533	1 ·698
Average Annual percentage of Deaths to Strength	1 ·024	·017	·031	·044	·434	·001	·001	·079	·103		·023	·043	·242	·063		·010	·006		·002	·077	·007	·016	·104	·001	·024	·274

Table shewing the number of Admissions and amount of Mortality from the most particular Diseases, amongst both European and Native Troops, in all the Divisions of the Presidency, during the period of ten years, from 1829 to 1838, inclusive, with the Proportion each bears to the Total number of Admissions and Deaths; the contrast in these reports in several of the columns of Disease between the European and Native Sick, is very remarkable.

	Cholera. Adm. and Deaths.	Cholera. Prop.	Fever. Adm. and Deaths.	Fever. Prop.	Dysentery. Adm. and Deaths.	Dysentery. Prop.	Hepatitis. Adm. and Deaths.	Hepatitis. Prop.	Diarrhœa. Adm. and Deaths.	Diarrhœa. Prop.	Thoracic diseases. Adm. and Deaths.	Thoracic diseases. Prop.	Rheumatism. Adm. and Deaths.	Rheumatism. Prop.	Syphilis. Adm. and Deaths.	Syphilis. Prop.	Total from these diseases. Adm. and Deaths.	Total from these diseases. Prop.
Europeans.																		
Total Admissions 166865	2,533	1/65	36,624	1/4	17,442	1/9	11,251	1/15	8,069	1/21	6,696	1/25	10,687	1/17	21,450	1/8	115,052	3/5
Total Died 4,725	770	1/6	498	1/9	1,382	1/3	545	1/8	159	1/29	316	1/15	93	1/51	63	1/75	3,826	4/5
Natives.																		
Total Admissions 347,327	5,346	1/65	137,596	1/2	5,506	1/63	487	1/713	9,010	1/38	4,998	1/69	29,214	1/11	11,697	1/29	203,814	1/1
Total Died 9121	2,413	1/2	2,123	1/163	587	1/93	62	1/5601	453	1/767	503	1/993	443	1/658	91	1/549	6,765	1/30

The following Table further exhibits the Annual Percentage of Admissions to the Strength; of Deaths to the Sick treated and the Percentage of Mortality to the Strength; it also exhibits the Differing amount of European and Native Sick to these reports.

	Cholera. Adm. and Deaths.	Cholera. Percentage.	Fever. Adm. and Deaths.	Fever. Percentage.	Dysentery. Adm. and Deaths.	Dysentery. Percentage.	Hepatitis. Adm. and Deaths.	Hepatitis. Percentage.	Diarrhœa. Adm. and Deaths.	Diarrhœa. Percentage.	Thoracic diseases. Adm. and Deaths.	Thoracic diseases. Percentage.	Rheumatism. Adm. and Deaths.	Rheumatism. Percentage.	Syphilis. Adm. and Deaths.	Syphilis. Percentage.	Total from these diseases. Adm. and Deaths.	Total from these diseases. Percentage.
European Strength 103431																		
Percentage of Sick to Strength	2,533	2 ·739	36,624	35 ·409	17,442	16 ·863	11,251	10 ·877	8,069	7 ·801	6,696	6 ·473	10,687	10 ·332	21,450	20 ·738	115,052	111 ·235
do. of Deaths to Sick	770	27 ·179	498	0 ·206	1,382	7 ·923	545	4 ·844	159	1 ·970	316	4 ·719	93	0 ·870	63	0 ·293	3,826	2 ·047
do. of Deaths to Strength	770	0 ·744	498	0 ·481	1,382	1 ·336	545	0 ·526	159	0 ·153	316	0 ·305	93	0 ·089	63	0 ·060	3,826	3 ·699
Native Strength 568,403																		
Percentage of Sick to Strength	5,346	0 ·940	137,596	21 ·207	5,506	0 ·968	487	0 ·085	9,010	1 ·585	4,998	0 ·879	29,214	5 ·138	11,697	2 ·058	203,814	35 ·860
do. of Deaths to Sick	2,413	45 ·136	2,123	0 ·411	587	10 ·661	62	12 ·731	453	5 ·027	503	11 ·064	443	1 ·516	91	0 ·780	6,765	4 ·948
do. of Deaths to Strength	2,413	0 ·424	2,123	0 ·373	587	0 ·103	62	0 ·010	453	0 ·079	503	0 ·104	443	0 ·077	91	0 ·016	6,765	1 ·190

MADRAS,

Situation. The capital of the Presidency of the same name, is situated on the coast of Coromandel, in Latitude 13° 6 North, and Longitude 80° 21 East.

The town of Madras and its limits within the jurisdiction of the Supreme Court, is from 7 to 8 miles in length, extending along the coast from the Adyar river on the south, to Tandiavoodoo on the north; and averages in breadth, from three to four miles inland. It is bounded by the sea on the entire of its eastern face, on the south by the Adyar river, and on the north and west by the Chingleput district, and the extensive sheets of water called the Long and Nungumbaucum tanks. The site of Madras is a perfectly flat sandy plain, but little elevated above the level of the sea, presenting no natural eminences of any description.

The nearest hills or elevated land are those of the Mount and Palaveram to the south-west, distant 8 and 10 miles respectively; and the Pulicat hills distant from 25 to 30 miles, in a northerly direction.

There are several extensive tanks in and about Madras, which for the most part are shallow, and become completely dried up during a great portion of the year, when their beds are partially cultivated as rice ground, and are also used for grazing cattle; these localities however do not appear to be productive sources of malarious disease.

General description of Town. The town properly so called is somewhat of a square form, and extends along the beach to the northward nearly one mile, and is enclosed on that and its west side by a strong wall, in former days fortified.

Fort Saint George is situated at the distance of about half a mile due south; and the villages of Royaporum, Vepery, Chintadrapettah, Poodoopettah, Egmore, Triplicane, Royapettah, and Saint Thomé, which have gradually risen up to the north, west, and south of the town, are now included under the same cognomen; with these it has an irregular shape, and is from ten to twelve miles in circumference; with a population variously estimated, but generally believed not to be under three hundred and fifty thousand souls.

Extent and Population.

Black Town. The Black-town, or that part of Madras within the walls, lies very low, being in some places only six inches above the level of the sea at spring tides, against the inroads of which it was found necessary several years ago to protect it, by a strong bulwark of stone; its population amonnts to upwards of 100,000 persons, chiefly natives, and of various castes, with a small proportion of Indo-Britons, and a few Europeans.

Three broad streets intersect the town, running north and south, dividing it into four nearly equal parts; these streets are respectable in appearance, well built, and contain many terraced, upstair houses; the principal European shops; the Supreme Court Jail; the Black Town, Male and Female, Orphan Schools; and on the beach, parallel with these streets, is a line of public offices, including the Supreme Court, the Custom House, the Marine Board Office, and also the Offices and Store houses of the principal European merchants; these are well finished buildings, having colonades to the upper stories, supported on arched bases, and plastered with shell mortar, forming a hard, smooth and polished surface, resembling white marble, when recently laid on.

The minor streets, occupied chiefly by natives, are numerous, irregular and of various dimensions, many of them extremely narrow, and ill-ventilated; the construction of the houses is also very variable, but the great majority have walls

of brick and clay chunamed over, with tiled roofs. The form of the native houses so general throughout India, is very commonly preserved here, viz. that of a hollow square, with the rooms opening into a court yard in the centre, entered by one door from the street, and seldom having any other opening outwards, on the ground floor; this effectually secures the privacy so much sought after by the natives, but at the same time, it interferes with proper ventilation, and on the occurrence of any epidemic, or contagious disease, must favor their extension, and increase the number of the victims.

Drains. The streets, with few exceptions, have drains on both sides, which are narrow, deep and open; they are cleared out every morning, and the contents removed by carts; the levels of some of them however have been imperfectly taken, rendering it difficult to prevent stagnant offensive matter from accumulating. There are three common sewers into which the smaller drains empty themselves, two of them running from the eastern part of the town, in a direct course to the sea; one is entirely open, the other partly covered; the third and the largest is placed in the principal street, the centre and lowest part of the town, and proceeds along its whole length, from north to south; this drain which is partly open, and partly covered, empties itself into the Cooum river near the Fort. These drains though daily attended to, and kept tolerably free from accumulation, not being floored with stone, and there being moreover but very little slope, offensive slimy matter collects in them, which is with difficulty removed. The effluvia arising from these drains is a source of continual complaint by those residing in their immediate neighbourhood, and must be detrimental to health; indeed remittent fever is not unfrequent in this part of the town, and is occasionally, it has been said, of a very bad type. The nuisance might be in a great measure remedied, by obliging the inhabitants to throw chatties of water into the drain opposite their houses daily, which would help to wash away the mud deposited in them, but the evil can only be ef-

fectually removed by having them floored with solid masonry, and constructed of an oval shape; a greater fall might be secured by having the head of the drains, somewhat more raised; the subject of improving their construction has for some time past been under the consideration of the authorities.

Water. The town is amply supplied with water, of a remarkably pure and good quality, from wells varying in depth from twenty to thirty feet. The water obtained from the wells in a certain enclosure near the north wall, known by the name of the "seven wells", is especially valued for its purity, which it is said by sea-faring people to preserve for a length of time at sea. Public water works have been erected in this enclosure by government, and two reservoirs have been constructed, one in the fort, the other midway between the fort and the town, which are daily filled from the wells by means of metal pipes: the shipping, and all the inhabitants who choose to send for it, are supplied from these sources.

The purity and wholesomeness of this water, seem to depend on its being filtered through a bed of fine sand, consisting almost entirely of quartz, which extends several miles in length in a northerly direction, but is not more than three or four hundred yards in breadth, its depth varying from one to fifteen feet; in some places the bed of sand is found near the surface, and in others it is covered to a considerable depth, with red clay and sand. It has been found, in digging wells in this stratum of sand, that if it be passed through, the water obtained below is of an inferior quality, and frequently brackish.*

On the north, west, and south sides of the town, is an open space of ground, or esplanade, separating it from the fort. The north esplanade is in a very filthy state from being the resort of natives every morning and evening, so also is the

* It may be mentioned here that the fine polish of the plaster, in the buildings of Madras, is obtained by the admixture of this pure sand with shell mortar.

west, along which a canal runs parallel to the wall at the distance of forty or fifty yards, the banks of which are also resorted to as a *place d'aisance* by multitudes of natives.

The following is a concise description of the different villages, which now form part of this extensive town.

Royapooram. Royapooram is situated outside the walls, on the north side of Black-town, at the distance of about a quarter of a mile, and extends for one mile along the beach. The inhabitants are chiefly fishermen and boatmen, amounting to about 8,000, they are persons of low caste, many being roman catholic christians; they live in huts of an inferior description, having mud walls, and cadjan (dried palmira leaves) roofs; the lanes and streets are very narrow, and unprovided with drains, so that there is a collection of filth, at almost every door. Scavengers are not employed in this district, and the space of ground between the town wall and the village is used as a necessary by the natives, and as a receptacle for the contents of the scavenger's carts from the town. From their filthy condition and the poverty of the inhabitants disease, when it appears in an epidemic form in Madras, invariably causes great havoc in this village; from the manner in which most of the people live, (for here poverty and vice truly go together) their families are badly clothed and fed; and their children are observed to be small and unhealthy; and it is calculated that two-thirds of them die before the age of maturity. The most prevalent forms of disease are *fever, dysentery, diarrhœa, and scrofula;* and from their being exposed so much to the glare of the sun on the water, the boatmen very generally, have defective vision, their eyes becoming *amaurotic,* or *cataractous,* at an early period.

Vepery, including the village of Pursewakum. These villages lie to the west of Black-town being separated from it by a spacious open esplanade about half a mile wide; the principal streets are well built, provided with drains, and kept clean, but the cross streets and lanes are close and often filthy.

One of the native regiments of the garrison is stationed in Vepery; a description of the lines or hutting ground &c. will be given hereafter.

Chintadrapettah. This village adjoins Vepery, being separated from it only by the river Coum, a bend of which almost encloses Chintadrapettah. The inhabitants are principally hindoos. The houses in Chintadrapettah are regularly built in streets, with drains on each side, and the village generally, has a cleanly appearance, except in the out-skirts.

A public dispensary, described in another place, is situated in this part of the town; and the return of diseases there given, shows the nature of the various distempers generally prevailing throughout Madras. The populous villages of Poodoopettah and Egmore, lie nearly due west of Chintadrapettah; the former being on the opposite bank of the river, and the latter at the distance of about half a mile west of Poodoopettah.

Triplicane and Royapettah. Triplicane, a very large village or town, runs parallel with the sea about one mile south of the fort, from which it is separated by the esplanade, the Coum river, and the government gardens. It is distinguished by being the seat of His Highness the Nabob of the Carnatic, the palace being situated at the north-east part of the town, close to the sea beach. Government House adjoins the palace, the parks being only separated by a wall.

The inhabitants are chiefly mahomedans, most of whom are followers, or in the service, of the Nabob.

The principal streets are clean and wide, having drains at either side; but the back streets are confined, and many of them without drains, they are filthy and offensive, and it has consequently been observed that when epidemic diseases appear, the inhabitants of these localities suffer considerably more than those in other situations. Westward of Triplicane, and nearly adjoining to it, is situated the extensive

and populous village of Royapettah; which is inhabited by a mixed population consisting of mahomedans, hindoos, and indo britons.

Saint Thomé

Saint Thomé, another village included under the general cognomen of Madras, lies about three miles to the southward of the fort close to the sea; and is called by the natives Mylapore, or "the city of peacocks." The inhabitants consist of hindoos, mahomedans and roman catholic christians, these last being a very dark complexioned race between portuguese and natives. The parts laid out in streets are generally clean, and in good order: there are several extensive cocoanut and plantain gardens in the vicinity, and some unappropriated or waste ground, both in and around the village, which give it a straggling and unconnected appearance; the situation of the village however, close on the sea beach, is considered favorable for european convalescents, and from its salubrity, it has for many years past been resorted to by sick officers from inland stations, for whose accommodation a number of convenient houses have been built on private speculation.

Garden houses or residences of the principal european inhabitants.

The garden-houses of the principal european residents are situated in separate plots of ground called compounds, and extend from three to four miles inland. They are generally of two stories, constructed in a pleasing light style of architecture, terraced with porticoes and verandahs supported by pillars. The lower story is often raised several feet from the ground; the doors and windows are large, and provided with venetian blinds so as to admit free ventilation; and the apartments are lofty, spacious and airy.

During the prevalence of the hot winds, tatties made of the root of the cussa or kuskus, a sweet smelling grass, are placed at the doors and windows, on the western side of the house, and kept wet, whereby a cool refreshing air blows gently

through the apartments; and by these means with the aid of the punkah, the extreme heat is moderated.

The compounds are usually planted with trees and shrubs, and when viewed even from a height, the tops of many of the houses only can be seen; these plantations interrupt due ventilation, but the evil is tolerated, in consideration of the protection they in a great measure afford, from the clouds of dust arising from the public roads and parched sandy soil, during a great part of the year.

Groups of native huts are seen interspersed here and there, in the vicinity of the garden houses.

Population. No census has ever been taken of the population of the several villages above described, and no records of births or deaths are kept; it is however generally supposed as already stated, that including Black-town it cannot be under 3,50,000 souls.

The construction of the native houses in general is similar to those of black-town, most of them are built of mud or mud and bricks, and roofed with cadjan leaves, presenting a mean appearance.

Wells. Wells are numerous in every part of Madras though the water of many of them is brackish and not drinkable, being only used for washing, cooking, &c.; there are however several which afford an ample supply of good water. In digging wells the upper part of the soil is found to be sandy, to the depth of several feet, a bed of clay is then met with mixed with reddish sand, and broken down sea shells extending to a great depth. Much doubt is always experienced as to the nature of the water which may be found; fresh, salt, or brackish springs, not unfrequently being contiguous to each other, a circumstance not depending on the depth to which the wells are sunk.

Tanks. Besides wells, tanks are also numerous, and some of them very extensive such as the Long tank, and Spur tank; a few contain good water derived from springs, but most of them are filled by the rains during the monsoon, and only answer for partial irrigation, becoming dried up as the hot season approaches; many have been neglected for several years and allowed to become filthy, from cattle being washed in them, and their banks being used as necessaries; thus causing a nuisance much complained of, and there can be no doubt that in place of being useful or beneficial, they are prejudicial to the health of the inhabitants in their vicinity.

It may be mentioned here that the use of the brackish water found throughout Madras, excites cutaneous eruptions of a troublesome nature, and not unfrequently fever, and strangers resorting to Madras whether Europeans or natives, are liable to be affected by it.

Food of Native population. The staple article of food is rice, eaten either with curry, *tyre, butter-milk, saltfish, chatney, chillies or some condiment. Natives usually take three meals in the twenty-four hours, the first early in the morning; the second at 2 or 3 P. M.; and the third or supper, at 7 or 8 P. M.; and but little animal food is used except by the mahomedan part of the inhabitants, who are generally more robust and of stronger constitutions than hindoos; various descriptions of inferior grain are used by the poor. Rice is brought from a distance both by sea and land, but vegetables are grown in great abundance in the immediate vicinity of Madras, such as onions, bendies, brinjals, cucumbers, gourds, and many different kinds of greens.

The lower orders are much addicted to the use of spirituous liquors and fermented toddy; opium eating, and smoking are also common amongst mussulmans, who smoke several kinds of narcotic drugs in their hookahs.

* Milk coagulated and slightly aciduleus.

Police. Madras has a regularly constituted Police establishment, under the regulations of which department the town has in many respects much improved.

The establishment is exclusively composed of natives called *peons*, placed under european superintendence and formed into six divisions; one being placed in Black-town, and one in each of the principal villages above described.

The common sewers, drains and streets of the several divisions are kept tolerably clean by the police with the aid of the Assessment department, and all encroachments upon the public streets, such as small huts, pandals, verandahs, &c. tolerated in former years, have been removed, and are now strictly prohibited. The drains have also been much improved of late years, though as already mentioned, owing to the low site of Madras generally, much difficulty exists in rendering them thoroughly efficient.

The erection of public necessaries in order to prevent the inhabitants resorting to the receptacles already mentioned, is a desideratum, and would add not only to the health, but also be conducive to the comfort of the people. It is understood to be in contemplation to erect three of these buildings, one at Vepery, one at Peramboor, and one at the north side of Black-town.

Markets, provisions, &c. It would appear that the Police have but little control in superintending the supply of native provisions, exposed for sale, although their interference is occasionally much required, as the people are generally so blinded by custom, that they continue to use the same food they have been accustomed to, although their neighbours and friends may be suffering from its deleterious effects. The truth of this statement was particularly remarked in 1837, and fatal consequences were not unfrequently noted; a particular sort of cheap rice having been exposed for sale, was eaten by the lower orders, though all the people acknowledged it caused bow-

el complaints, which in many instances terminated in cholera. There are also several kinds of fish, which at particular seasons, are known to be unwholsome, but which are eaten, although the people are well acquainted with the bad effects resulting from their use.

The European markets and slaughter houses are more under the control of the police, and are well regulated, and kept tolerably clean. They are supplied abundantly with beef, mutton, veal, kid, &c. of a fair quality, and at moderate prices, (the animals are generally slaughtered over night;) fowls, capons, turkies, ducks, geese, &c. are also plentiful. There is also an ample supply of excellent fish, of different kinds; and vegetables of various sorts, such as potatoes, turnips, peas, carrots, cabbages, knolkole, beans, greens of several varieties, sweet potatoes, yams, onions, and sallad; the potatoes are imported from Bangalore and other parts of Mysore, where they grow in perfection. The market is also well supplied with various kinds of fruit, as mangoes, plantains, pine-apples, custard-apples, oranges, grapes, jack fruit, guavas, &c. and many others less esteemed.

Public houses. The licensed public houses, are also under the *surveillance* of the police, and are restricted to particular localities, the owners being liable to punishment for misconduct, or breach of the regulations.

Climate. Before entering on a particular description of the climate of Madras, it may be necessary to premise a few general observations on that of Southern India.

Monsoons. Like other tropical countries the Indian peninsula is within the influence of the trade winds, or as they are here called monsoons. These monsoons, or prevailing currents of air, are supposed to be the effect of the colder air from the opposite sides of the equator to that in which the sun is situated, rushing to supply the place of the highly

rarefied air surrounding the tropical continents, the temperature of which is greatly increased at that period. The perfect elasticity of atmospherical air enabling it to keep up an equilibrium notwithstanding the powerful effect of a tropical sun acting in so extensive a space, as the continents of Africa and Asia.

The wind for a certain period of the year blows from the south-west, and for a certain period from the north-east; the south-west monsoon prevails while the sun is north of the line, the temperature of the continent of India being then higher than that of the ocean, this wind continues from April till October, with more or less regularity as to its commencement, and termination. The North east monsoon which succeeds, sets in about the middle of October, and continues till March; the sun being south of the line, the temperature of the ocean, and of the tropical parts of the African continent are then higher than that of India; the periods at which these monsoons set in, is earlier in the south west monsoon, in the southern parts; and in the northeast monsoon, in the more northern parts of the peninsula. These monsoons are usually ushered in by heavy rains, attended with much thunder, and lightening, and occasionally by severe gales. The north-east monsoon expends its violence chiefly on the Coromandel coast, whereas the South-west monsoon is felt with more severity, on the coast of Malabar.

Land and Sea Breezes.

Besides these annual changes, it is of importance to notice, that during the hot months especially, when the sun is north of the equator, a diurnal change in the direction of the winds is produced, and which is more particularly experienced in the vicinity of the sea coast, known as the land, and sea breezes. These daily changes of the wind, are explicable on the same principles as those of the monsoons, viz. the rarefaction of the air on the land during the heat of the day, causing a rush of cooler air from the sea to supply its place, whilst a current in the opposite direction, occurs when the sun is below the horizon. The sea

breeze usually commences about noon, or 1 o'Clock P. M. when the sun is nearly vertical for a great portion of the year, and continues till sun set, or later, when it is succeeded by the land wind, which commences towards midnight, and continues till the sea breeze sets in next day; the change from the hot and oppressive land wind, to a cool refreshing sea breeze, (commonly called the *Doctor* from its invigorating effects,) often occuring with surprising rapidity, and with an interval of not more than from five to ten minutes.

The year admits of a further division into the hot, rainy, and cool seasons; the hot season commencing in March, and continuing till the end of May or June when the rains set in, and last with occasional breaks, or intervals of greater or less duration, till November; after which the weather becomes cool, dry and pleasant, and continues so till the end of February.

Climate of Madras. During the months of January, and February the weather at Madras is cool and pleasant and this period is considered to be the most healthy season of the year; the mean temperature of these months is 76° of Fahrenheit; the wind blows steadily from N.E. and E. and the average fall of rain is 1 inch, 25 cents. In March, April and part of May the south (or as it is called) the "along-shore" wind prevails, and is reckoned very unwholesome, particularly to old residents, who generally suffer during this time of the year from rheumatic pains; the mean temperature of these months is 85°; and the average of rain 1 inch, 85 cents. In the early part of May, very violent gales of wind have occasionally been experienced, accompanied with heavy falls of rain; about the middle of the month the hot land wind commences, and blows generally with great violence from about midnight till 12, or 1 o'Clock in the day, when it is succeeded by the sea* breeze, which at this season is very refreshing; the land wind continues throughout June and

* The Easterly and South S. E. wind.

July; the mean temperature of these months being 88° ; and the average of rain 2 inches, 20 cents. In the beginning of July there are generally heavy showers of rain, which diminish the heat of the land wind, but it continues to blow during the month, though with less violence : mean temperature 85°, average fall of rain 3-37. In the month of August, and September, the weather becomes cloudy, close and oppressive, the sea breeze being uncertain, and the winds generally light and variable, with frequent calms ; heavy falls of rain ushered in by thunder and lightning also occur in these months, the mean temperature of which is 84° ; and the average of rain 10 inches, 6 cents ; it is during these months, that the cholera has generally raged epidemically at Madras. About the beginning of October the N. E. monsoon commences, and continues, through the months of November and December ; in October heavy gales of wind are very frequently experienced : the weather is cool and damp, the mean temperature 80°, and the average of rain 30 inches.

Average medium temperature throughout the year, for 10 *years.*

1829	1830	1831	1832	1833	1834	1835	1836	1837	1838
Fahrenheit.									
83	81	81½	84	83	87	82	77½	82½	86½

Hurricanes of frequent occurrence.

The coast of Coromandel having from time to time been subject to hurricanes, or violent gales of wind, the most remarkable of which occurred at the following periods,

	A. D.		A. D.
2d October	1746	24th October	1818
21st ,,	1763	29th & 30th March	1820
5th ,,	1782	6th December	1827
26th November	1785	30th October	1836
10th & 11th December	1807	1st ,,	1837
1st & 2d May	1811	11th November	,,

it is of importance to attend to the slight fluctuations which occur in the mercury in these latitudes, as indicated by the

Barometer, more particularly at certain seasons; as they have been known to fortel the approach of storms; and such was actually the case, in the severe storm at Madras in October 1836.

On the morning of the 30th October of that year, the Barometer was observed to fall, and become unsteady, and this being considered a certain indication of an approaching gale, due warning was accordingly given to the shipping to quit the roads, and all with one exception having put to sea, escaped the danger of being driven on shore.

The following is a copy of the Meteorological journal, kept at the Madras observatory, during this gale.

				Barometer. Inch.	
29th Oct.	1836	10 o'Clock	A. M.	.30,050	rain.
30th do.	„	6 do.		..29,940	brisk breeze.
„ do.	„	7 30 do.		..29,864	strong wind at intervals.
„ do.	„	12 Noon		..29,707	approaching to a gale.
„ do.	„	1 o'Clock	P. M.	..29,586	brisk gale.
„ do.	„	3 do.		..29,510	at times violent gale.
„ do.	„	4 do.		..29,360	very violent gale.
„ do.	„	5 do.		..29,150	approaching to hurricane.
„ do.	„	7 to 8 do.		..28,915	a violent hurricane.
„ do.	„	11 do.		..29,650	very strong wind.

N. B.—The storm was accompanied by very heavy and constant rain; 10 inches having fallen during the 29th, and 30th October.

The annexed statement exhibits the mean monthly range of the Barometer and Thermometer, for the year 1838; as the variations indicated by the former instrument are in ordinary circumstances very trifling, it has not been considered necessary to include the observations of more than one year, in this report.

Meteorological Observations during the year 1838.

	Barometer at			Thermometer at		
	10 A.M.	4 P. M.	10 P.M.	10 A.M.	4 P. M.	10 P.M.
	Inch.	Inch.	Inch.	°	°	°
January, monthly mean.....	30,147	30,063	30,118	75,4	77,9	73,4
February do.	30,127	30,040	30,100	78,4	80,6	77,3
March do.	30,073	29,960	30,039	82,9	85,3	80,8
April do.	30,004	29,883	29,968	86,7	88,4	83,9
May do.	29,928	29,817	29,912	88,9	89,6	85,7
June do.	29,868	29,765	29,839	88,5	90,3	86,7
July do.	29,882	29,797	29,865	88,4	91,6	86,7
August do.	29,864	29,767	29,845	85,3	88,9	84,9
September do.	29,913	29,837	29,901	86,8	89,1	84,7
October do.	30,027	29,962	30,013	83,3	85,4	81,9
November do.	30,049	29,974	30,030	78,7	80,0	77,9
December do.	30,106	30,028	30,087	77,6	79,1	76,7

Endemic diseases, Fever.

Fever of the intermittent, and remittent types, may be said to be endemic amongst the natives of Madras; neither of which however have prevailed to any extent during the last seventeen years; these fevers are attributed by the medical officer, who has been in charge of the Black-town, during the whole of that time, to the imperfect manner in which it is drained: the greatest number of cases have always been observed to occur about the centre of the town (where the drainage is most stagnant), during the hot season of the year.

Leprosy.

Lepra is likewise endemic, being very common, and supposed by the natives to be both contagious and hereditary; it is also considered by them, to be a direct manifestation of the anger of the deity. This disease is very generally seen amongst the poorest classes of natives, both hindoos and mahomedans; it is but rarely observed before puberty, but both sexes are equally liable to it.

Elephantiasis.

Elephantiasis, the leprosy of the Arabians, is considered to be a species, or variety of the last named disease, and is another endemic on this part of the coast. It is said by the natives not to be infectious; but they believe it to be hereditary; and like lepra, the poorer classes of peo-

ple seem to be most obnoxious to its attacks, being seldom seen in those who are well fed and clothed; and though exceptions are occasionally met with, innutritious diet and filthy habits, are believed to favor its development. The feet, legs and scrotum, are the parts usually affected with this disease.

For further remarks on elephantiasis, see Southern Division, district Cochin, where it is so very prevalent, as to be designated the "Cochin Leg."

Guinea Worm.

Guinea Worm has been observed to occur annually for the last six years in the villages of Chintadrapettah, Vepery, and Perambore; it was not seen in any of these places prior to that period, but the numbers affected have since been on the increase; it usually prevails in the months of February, March, April, May and June. The water which is used by the inhabitants of these parts of the town, both for drinking, and for the purposes of ablution, is the same to which they have been accustomed for many years past. Guinea worm has been met with equally in Indo-britons, and in the natives resident in these villages, but is more rarely seen in Europeans.

Cholera.

Cholera.—This disease which for a considerable time past has been of annual occurrence, in some years prevails to a considerable extent; and is attended with its usual formidable mortality. The greatest number of attacks have always taken place amongst the poorest classes of people; and the per centage of mortality has also been observed to be greatest amongst them;—it generally makes its appearance, towards the end of the hot, and beginning of the wet-season, continuing with more or less severity during the months of August, September and October, and in some years till January.

Small Pox and Vaccination.

Small Pox occasionally prevails epidemically, though much is done to check its progress and extension by the vaccine department. There is

however much indifference on the part of the natives to receive vaccination, and this too, notwithstanding that they are fully aware of its protecting influence, and are encouraged to bring their children to the vaccine depôt by having rice served out to them; when small pox prevails, the dread of that disease brings them forward, but even then, some prefer small pox inoculation. This prejudice against vaccination arises from apathy, and not from inefficiency as to its antivariolous influence, for here as in Europe, it equally maintains its prophylactic power. The benefits of this department have been greatly extended by the medical subordinates in the regular service being now all instructed in vaccination, and required whether attached to regiments or civil stations, to perform the operation in their immediate neighbourhood, under the superintendence of the medical officers, under whom they may be placed. The additional aid thus given to the vaccine department will be ample, and this measure which has been encouraged by government is expected to be followed by most beneficial results.

Influenza. *Influenza* has also visited Madras at times; the disease is of the same character as seen in other parts of the world; but is generally mild, and seldom fatal either here or in other parts of southern India.

The tables appended will show the prevalence of the foregoing diseases; the last mentioned being included under the head of *ephemeral fever*.

Diarrhœa and Dysentery. *Diarrhœa* and *Dysentery*, are of frequent occurrence, the former appearing occasionally in an epidemic form, when preceding or following the appearance of cholera.

Native treatment of Disease. For the cure of leprosy the natives possess no effectual remedies, they prescribe the asiatic pill, composed of arsenic, pepper and the *mudar root, but little

* Aclepias gigantea.

confidence however is placed in it, and they rely more on nutritious diet, than on medicine.

In fever, mercury, arsenic and some febrifuge barks are given, but the efficacy of the latter is doubtful.

Croton appears to be the principal purgative employed by them, and is used in almost every disease; aloes, camboge, senna, and rhubarb, which are procurable in the bazaars, being seldom given.

In cholera the chief remedies are astringents with stimulants, and opium; a combination of pepper and spices has also long been used by native practitioners, and a pill of corrosive sublimate and common salt, forms another favorite remedy.

In small pox, gentle laxatives such as castor oil, with a cooling regimen consisting of cocoanut water, lime juice, and congee water, butter milk, tyre &c. are prescribed, every thing heating being withheld, and the patient kept in a cool apartment. The irritation on the surface, is relieved by the application of plantain leaves smeared with oil.

In diarrhœa and dysentery, chalk combined with spices, black pepper roasted, catechu, opium, the seeds of the poppy, and castor oil, are the chief remedies.

The natives generally are in the habit of using purgatives periodically, as a prophylactic against disease.

The endemic diseases amongst the European part of the population civil and military, described hereafter, are *fever*, *dysentery*, and *hepatitis*, but more especially, the two first.

MADRAS NATIVE INFIRMARY.

This infirmary was established in the year 1799, for the purpose of receiving, and affording medical aid to the native poor of the Presidency.

The Monegar Choultry or Poor Asylum, which was established in 1784, and which has since undergone considerable improvement in its construction, was united with the native infirmary under the sanction of Government in 1809, upon a guarantee in favor of the latter, that its funds amounting to Rupees 54,358 should be transferred to the joint charity, in Government securities, unredeemable.

The hospital and offices form an irregular square, which is divided in its centre by a high wall separating the accommodation for the men, from that of the women. It is a pent roofed brick building, and tiled, with a verandah on the inner side towards the area, and calculated to contain 140 patients; all the wards are well ventilated by doors and windows, and by ventilators in the roof. Attached to it are quarters for the apothecary, an excellent surgery, and a dispensary for issuing medicines to out patients.

Seven cells are appropriated for insane patients, capable of accommodating 14 persons; those for the men and women being in separate areas, and surrounded by walls of sufficient height to render them secure. The institution is well arranged, and appears well calculated in every respect for a native hospital.

A Leper Hospital for Indo-Britons and natives is also attached to this institution, a distinct building surrounded by a wall 12 feet high and capable of containing about 110* patients; the Ennore road passes between it and the infirmary, and its inmates are not permitted to have any intercourse with the patients in the infirmary.

The records of the infirmary, and those of the two dispen-

* 50 Indo-Britons and 60 Natives.

saries, show the nature of the diseases to which the natives of this part of India are subject. To account for the vast mortality which occurs, it is necessary to premise, that disease whether acute or chronic, is frequently allowed by natives to run its course under native treatment, or without applying for aid until it becomes too late to derive benefit from medicine, from their having in many instances an aversion to enter an hospital until all their own resources fail.

The majority of the patients belong to the lowest and poorest classes who, notwithstanding their poverty, will not apply for aid till reduced to the last extremity; the result of treatment cannot therefore be correctly ascertained, nor can it be otherwise from what has been already stated, than unsatisfactory.

During the 12 years from 1827, to 1838 inclusive, 12,446 patients have been treated in this hospital, and the mortality has been in the same period, 3,344; or very nearly 27 per cent, on the number of admissions.

In the year 1833,* which was a year of famine, no less than 5,518 persons were admitted into the infirmary and 1,779 deaths took place; excluding this period the average annual admissions for eleven years, have been 559; and the average annual number of deaths 141; the percentage of deaths, on the number treated, being 23½.

* The highest numbers receiving food from the Choultry at one time, during this year, were as follows:—

At the Choultry Depot.....	39,017
„ Trivatoor do.	31,866
„ Aroombakum	9,150
Total..	80,033

and the highest numbers employed on public works exclusive of those fed were,

Under the orders of the Chief Engineer..	16,647
Do. do. Superintending do.	1,500
Under the orders of the Superintendent of Public Roads.....	1,870
Do. Inspector of Streets and Roads.	2,500
Do. Master Attendant.....	100
Do. Superintendent Gun Carriage Manufactory.....	67
Total..	22,684

The following table exhibits the number of admissions and deaths, from each class, and more important species of disease in each half year, for the above period.

MADRAS NATIVE INFIRMARY.

No. 1.—*Table exhibiting the Number of admissions and deaths from each class of Disease for 12 years.*

CLASSES.	DISEASES.	From 1827 to 1838. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Admissions and Deaths from each Class of Diseases. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Total admissions from each Class.	Total deaths from each Class.	Average per centage of deaths to sick.
Fevers	Febris Ephemera	175	0	142	1							
	„ intermitt. quot:	4	2	14	0	210	12	232	21	442	33	7 ·466
	„ remittens	29	10	76	20							
	„ continua	2	0	0	0							
	Cholera	52	29	83	50	52	29	83	50	135	79	58 ·518
Diseases of the Abdominal Viscera	Diarrhœa	284	85	144	28							
	Dysenteria Acuta	10	5	13	3							
	„ Chronica	38	13	60	20							
	Colica	22	0	11	0	395	106	268	53	663	159	23 ·981
	Obstipatio	20	2	17	1							
	Hœmorrhois	4	0	3	0							
	Peritonitis	6	1	2	1							
	Dyspepsia	11	0	18	0							
	Hepatitis Acuta	4	0	3	2	8	1	8	3	16	4	25 ·0
	„ Chronica	4	1	5	1							
Do. Lungs	Catarrhus	18	3	15	5							
	Asthma	7	0	9	4							
	Phthisis pulmonalis	9	6	5	2	37	10	35	12	72	22	30 ·555
	Hœmoptysis	0	0	1	1							
	Pneumonia	3	1	5	0							
Do. Brain	Epilepsia	9	1	17	3							
	Paralysis	27	0	30	7							
	Cephalalgia	7	1	10	0	342	38	360	44	702	82	11 ·680
	Amentia	146	9	138	11							
	Mania	152	16	165	23							
	Hydrophobia	1	1	0	0							
Do. Eye	Morbi Oculorum	9	0	6	0	9	0	6	0	15	0	0 ·0
Do. Skin	„ Cutis	155	5	126	7	155	5	126	7	281	12	4 ·270
Eruptive Fevers	Variola	89	34	263	145							
	Varicella	125	0	13	0	296	35	283	146	579	181	31 ·269
	Rubeola	81	1	6	0							
	Erysipelas	1	0	1	1							
Dropsies	Anasarca	122	71	115	69	137	82	120	72	257	154	59 ·922
	Ascites	15	11	5	3							
Rheumatic Affections	Rheumatismus Acutus	24	2	10	2	283	8	225	13	508	21	4 ·133
	„ Chronicus	259	6	215	11							
Venereal do	Syphilis Primitiva	14	6	28	3							
	„ Consecutiva	10	6	18	3							
	Gonorrhœa	12	0	17	0	44	12	66	6	110	18	16 ·363
	Hernia Humoralis	8	0	2	0							
	Strictura	0	0	1	0							
Specific Diseases	Atrophia	1348	569	2,569	1,247							
	Beriberi	1	1	9	1							
	Elephantiasis	2	1	3	0	1811	735	3,181	1,451	4,992	2,186	43 ·790
	Lepra	326	141	444	167							
	Dracunculus	10	0	15	1							
	Scrophula	124	23	141	35							
	Phlogosis	906	102	1,300	175	906	102	1,300	175	2,206	277	12 ·556
	Wounds and Injuries	157	18	227	19	157	18	227	19	384	37	9 ·635
	Other Diseases	550	33	534	46	550	33	534	46	1,084	79	7 ·287
	Total	5,392	1,226	7,054	2 118	5,392	1,226	7,054	2,118	12,446	3,344	26 ·868

MADRAS.

REMARKS.

Fever. The admissions from fever have not been very numerous but the mortality has been great, and in the remittent form it is fully 30 per cent; nearly one half of the total admissions under this head occurred in 1833, the year of famine, as above remarked.

The treatment has consisted in the exhibition of smart purgatives on admission, followed by the use of the saline antimonial solution, and an occasional scruple dose of calomel at bed time—leeches and blisters being applied when thought necessary. V. S. has been seldom admissible from the weak state of the patients. Quinine does not appear to have been employed; but during convalescence tonics have been used.

Cholera. *Cholera,* as might be expected "a priori", has been attended here with fully its usual mortality. The treatment has been *steadily,* calomel in scruple doses, with compound powder of jalap given alternately; and stimulants, turpentine enemata, and sinapisms as adjuncts.

Diarrhœa. The cases of Diarrhœa have been generally the effect of extreme want or this complaint has supervened in the latter stages of other diseases; no fewer than 187 cases, with 39 deaths occurred in 1833. In the treatment of these cases the mildest food was requisite, with gentle tonics, and cordials. The paucity of diseases of the liver, and chest will be observed, whilst on the contrary diseases of the brain have been frequent.

Eruptive Fevers. *Eruptive Fevers.* The table exhibits in a peculiarly striking manner the value of vaccination; fully one half of the cases of variola, in persons unprotected by its antidotal power, having died; whilst in the cases (one hundred and thirty-eight in number) who had been vaccinated no death occurred, and it is worthy of observation that the greater number of cases in both classes of patients (the protected

and unprotected) happened in the same year 1833, and were consequently in other respects, placed in similar circumstances. All the cases of modified small pox exhibited distinct marks of previous vaccination, in one or both arms; and many of the patients had been vaccinated at the Monegar choultry, adjoining to the hospital, to which they had resorted for food. Small pox might probably have spread to a considerable extent amongst the poor who came to the Presidency to seek for food, had it not been for the exertions of the Superintendent of vaccination who on the disease appearing amongst the paupers, adopted the precaution of vaccinating all those applying for relief, who did not exhibit marks of small pox, or of previous vaccination; and out of the vast numbers who were fed at the choultry that year, nearly 8,000 received by the adoption of this system, *successfully*, the protection of vaccination.

Atrophia. *Atrophia.* The number of cases and mortality under this head are calculated to excite surprize; but of the number exhibited in the table 3,917:—2,952 occurred in 1833, with 1,236 deaths, and were all the consequence of want; many died on admission, others lived but a few hours, while the most of those who were rescued from a cruel fate, were saved with difficulty. In almost every case the bowels were relaxed on admission, or became so after taking food.

The treatment consisted in giving mild nutritious diet; rice congee of a thick consistence, with a little ginger powder and salt, was that generally preferred by the patients; cordials with aromatic spirits of ammonia and laudanum or astringents with chalk mixture, and laudanum; the doses regulated according to the effect produced; in every instance where wine was given, it proved injurious.

Phlogosis & Ulcers. *Phlogosis.* Under this head 1,513 cases of ulcers are included, with 215 deaths; the vast mortality attending this disease requires a few explanatory remarks. The worst cases have always been noticed to occur in

weakly ill fed persons; no fewer than 502 admissions wtih 83 deaths, occurred in the year 1833; and 188, with 25 deaths, in the year following.

The character of the sore has been that described by some writers as gangrenous ulcer, by others phagedenic and by others hospital gangrene; many of the cases closely resembled this last form of disease, with the exception of not being contagious; it is a disease solely depending on debility from want of proper food; as would appear from its usually occurring in the feet and legs; and its being met with almost exclusively in hindoos, whereas it is seldom seen in the stouter, and better fed mahomedan. No local treatment is of benefit in these cases until the constitution is invigorated and improved by diet, and attention to the digestive functions; and it has been invariably found that as the general health improves, the sores also begin to amend; ulcers of this character are seldom absent from the infirmary, but no case has ever occurred to countenance even the slightest suspicion of its being contagious, for although there are always many chronic ulcers and other sores in the institution, they have in no instance been observed to take on the phagedenic form.

Necessity for Public Dispensaries.

Seeing then that there is so great a prejudice, and also an unwillingness on the part of the natives in general, to apply to an hospital for aid, for here as elsewhere, even poverty itself submits with reluctance to leave its *own* abode, the usefulness and even the necessity of public dispensaries will be obvious. The people have less objection to apply to them for aid, and when well regulated they are calculated to do much good, both in relieving sickness, and in preventing disease.

The Chintadrapettah Dispensary has been highly useful in both these respects, since it was established in 1828, as the following table will show.

Classes.	No. of Admission.	Principal diseases.	Deaths.
Fevers	3,968		11
Cholera Biliosa	117		46
Do. Spasmodica	123		63
Diseases of the abdominal viscera	6,248	1137 Diarrhœa	7
		446 Colica	0
		1015 Dyspepsia	1
		3017 Obstipatio	0
		547 Dysenteria Ac: et chronica	2
Liver	61		0
Diseases of the Lungs and Heart	1,309	1092 Catarrhus	0
		143 Asthma	0
		22 Phthisis pulmon.	1
		30 Hœmoptysis	0
Do. Brain	293		1
Do. Eye	127		0
Do. Skin	1,751		0
Eruptive Fevers	35		1
Dropsies	212		3
Rheumatic affections	2,562		1
Venereal affections	1,116	134 Syphilis primitiva.	
		42 „ consecutiva.	
		805 Gonorrhœa.	
Specific diseases	1,336	840 Scrophula.	
		104 Elephantiasis.	
		203 Guinea worm.	4
Wounds and Injuries	1,277		0
Phlogosis	7,633	1382 Otalgia.	0
		1356 Apostema.	0
		3115 Ulcus.	2
Other diseases	1,526	„ „	4
Total	29,694		147

The native population highly appreciate this institution, and also the one attached to the infirmary, which was opened in 1837.

As already remarked these dispensaries are calculated to do much good, but this can only be effected under the strictest superintendence, as otherwise they would lead to abuse

and a needless waste of medicines; in both the institutions adverted to a considerable proportion of the medicine prescribed, is given to the patients in the presence of the medical subordinates, and every care is taken to ensure the strictest regularity and attention. A register is kept shewing the name, date of admission, disease, days of attendance, and the result in each case, and but very few patients are found to absent themselves until regularly discharged.

GENERAL HOSPITAL.

Situation & General description.

The General Hospital, as its name implies, is an institution for the reception of both European and native sick, whether belonging to the public service or not. It is situated on the esplanade of the Fort, at the south western extremity of Black-town, near an angle of the town or rampart wall, which encloses, and bounds the building on its southern aspect; it is distant from the Fort, due west, 520 yards, being the average width of the esplanade on the southern and west sides. The soil on which the hospital is situated is sandy and dry; and the site though low, is not lower than that of the surrounding plain.

The space occupied by the hospital and offices attached, measures in length 185 yards, and 145 in breadth; being bounded on the south side by the rampart or town wall, on the east and west by a wall of 10 feet in height, and on the north partly by the wall, and some offices.

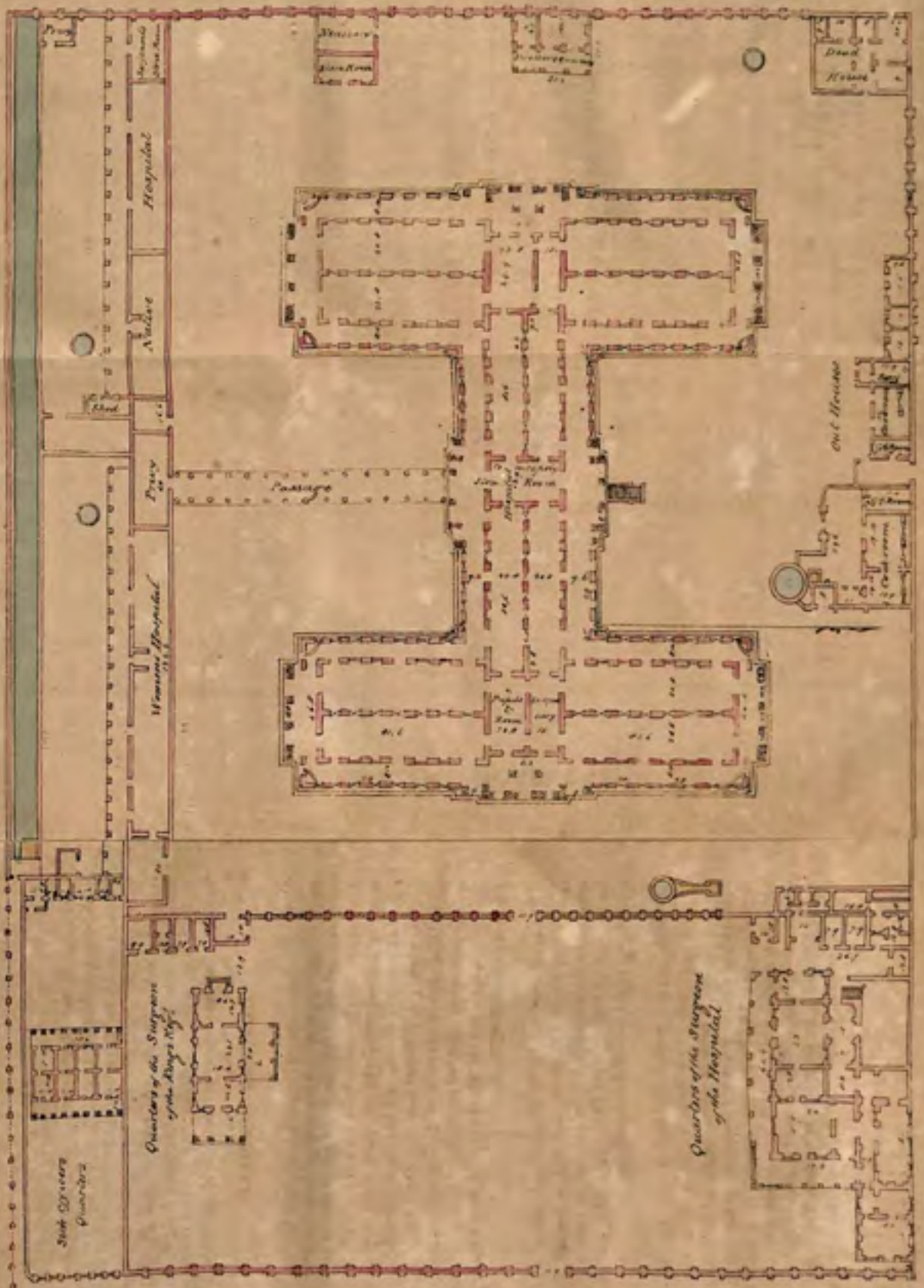
The hospital is a puckah building of one story, having a terraced roof, with brick floors raised about a foot from the ground. It consists of three ranges of buildings two of which run parallel and are connected by the third in the form of the letter **H**, the principal entrance being in the range which faces east; each of these buildings contains a double range of commodious wards, four in number, surrounded by a verandah nine feet wide, the wards being each 80 feet in length by 21 in breadth, and 15½ feet high. In the centre of the

PLAN

of the

GENERAL HOSPITAL

at the Presidency.



parallel ranges which form the wings, are two apartments for the surgery and dispensary, and for the medical subordinates; and in the centre of the connecting building are rooms for the Commissariat hospital stores.

The wards are ventilated by doors and windows, there being three spacious doors, and three windows provided with venetian blinds, in each; the partition wall having likewise an equal number of arched door-ways. Each ward of which there are twelve in number, can accommodate sixteen patients, and the building is therefore calculated for 192 patients; but it can receive on emergency a much larger number.

The building now described is solely for the reception of European sick, one half of which is appropriated as an hospital for the sick of Her Majesty's regiment occupying Fort Saint George.

Detached from the hospital but in the same enclosure, and extending its whole length from east to west, is a range of buildings, pent roofed and tiled; one-half of which, capable of containing fifty patients, is set apart for European women and children, the other for native sick, of both sexes, who have separate apartments.

The dispensaries, store room, cookroom, and other outhouses are conveniently arranged, and well adapted for their purposes and there is an ample supply of water on the premises.

In the same enclosure are quarters for the surgeon of the General hospital and his assistants, as also for the senior medical officer of Her Majesty's regiment.

The aspect of the hospital between north and north east, is obstructed by the houses of Black-town, which are separated from it by a public road, leading to one of the gates, and forming one of the principal thoroughfares of Black-town; the buildings in the vicinity of the hospital are dense, intersected by narrow and filthy lanes; and inhabited by persons of the

lowest class. There are several native places of worship close by, and the noise, especially during any of the festivals, is a source of much annoyance to the sick.

The wall or rampart which surrounds Black-town forms an angle, as already stated, in which the general hospital and offices are situated, the rampart terminating on the southern side in a line with the front wall of the hospital compound; beyond the rampart and around the town there is a clear space varying in breadth from a quarter of a mile to one mile; the canal formerly alluded to as running parallel to the rampart, passes the hospital at the distance of 130 yards, and its banks for a considerable space, are resorted to as a *place d'aisance* by the natives.

There is also a ditch or drain between the canal and rampart, which, after running parallel to the latter, turns to the south-west angle of it, at a distance of one hundred yards from the hospital compound, and after passing the whole length of the southern side of the hospital, it then meets a similar drain leading from Black-town, and also a branch of the Cooum river, immediately below the glacis of the western angle of the fort.

The south-eastern aspect of the hospital, is clear from the compound to the sea; a branch of the Cooum river running parallel to, and about two hundred yards distant from its southern face; at the western angle of the fort, and nearly due east from the hospital, this branch turns towards the southward, where it unites again with the other branch, into which the main river had bifurcated about a mile higher up, encircling by their reunion a spacious piece of ground called the "Island."

Thus, the hospital is freely open to the southerly, and somewhat less so, to the easterly winds, or sea breeze, both however blow across these drains, and the easterly wind passes over the fort ditch also, before it reaches the hospital. When these drains are cleared out, the soil is spread on the banks

and allowed to dry there; the time chosen for this purpose is usually the end of the hot season, and it has been remarked, that convalescence then proceeds more slowly amongst the sick than at other seasons of the year, and that ulcers are apt to put on an unhealthy appearance, rendering frequent fumigation of the hospital necessary.

The hospital though centrical is, from the causes above stated, far from being in an eligible situation, though no epidemic disease has prevailed in it for the last 10 years that could be attributed to its locality. The compound is small, and confined, being surrounded with a wall of 10 feet in height, which materially interrupts free ventilation.

The construction of the building may be looked upon as a model, perfect in every respect for an hospital in this country, were the floor raised 5 feet higher from the ground.

Rules for the admissions of patients.

It has been already mentioned, that this hospital is open for the reception of European and native sick of the Military, Seamen of H. M'.s Navy, and of private ships; and European sick, not belonging to the service, whether male or female who may be destitute, are also admitted, clothed and victualled at the expence of Government. Native sick not belonging to the public service, are likewise admitted in cases of accidents and other emergencies.

The following is the scale of authorized deductions and charges recovered from patients treated in the General hospital.

	R.	A.	P.	
Commissioned officers and superior grades of Warrant officers.....	1	0	0	per day.
Conductors, Overseers, Troop Quarter Masters, Riding Masters, Sub Conductors, Sub Overseers, Apothecaries, second Apothecaries, and Assistant Apothecaries.....	0	8	0	do.
Wives of Warrant Officers.....	0	5	0	do.
(The stoppage to be made from their Husband's abstracts.)				

	R.	A.	P.	
Non-Commissioned Officers, Corporals, Drummers, Privates, Carnatic Ordnance Artificers, &c.	0	3	0	do.
European Women, (wives of Soldiers.)	0	1	0	do.
Seamen of the Royal Navy, and of Merchant vessels.....	0	5	0	do.
Chelsea Pensioners, and Pensioners of the H. C. Service.....	0	3	0	do.

Persons having the means of supporting themselves, or having relatives or friends able to support them, may be received into the general hospital at the discretion of the surgeon in charge, subject to the approval of the Superintending Surgeon, provided that they furnish, if in the public service, a requisition for admission from the head of the Office to which they belong; otherwise a written engagement from some respectable individual at Madras, to pay monthly, the regulated charge for the period they may be in hospital.

Recoveries are to be made from persons of the foregoing description, at 8 annas per diem.

No stoppages are made from Sepoys,—Lascars,—Native Artificers,—or the poor.

The General hospital is the principal institution to which assistant surgeons, on their first admission on the establishment, are attached during their probationary course, for initiation into the treatment of tropical diseases. It affords an excellent field of observation, and under the tuition and guidance of experienced superintendents, the probationers are generally qualified for the general duties of the service in about six months.

The tables annexed show the number of admissions into the General hospital, and deaths from particular diseases, as well as from each class of disease, during each half year for a period of 10 years, with the per-centage of deaths, to the number treated. The average annual number of admissions, for this period, amounts to nearly one thousand.

PRESIDENCY GENERAL HOSPITAL.

No. 2.—*Table exhibiting the number of Admissions and Deaths from each class of Disease for* 10 *years.*

EUROPEAN TROOPS.

CLASSES.	DISEASES.	Years 1829 to 1838, inclusive. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Admissions and Deaths from each Class of Disease. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Total admissions from each Class.	Total deaths from each Class.	Average per-centage of Deaths to Sick.
Fevers	Febris ephemera	82	0	150	0							
	„ intermitt. quotid.	47	4	37	2							
	„ „ tertian	4	0	4	0	177	5	237	9	414	14	3 ·381
	„ remittens	12	0	7	0							
	„ continua	32	1	39	7							
	Cholera	12	10	29	23	12	10	29	23	41	33	80 ·487
Diseases of the Abdominal viscera	Diarrhœa	95	4	175	6							
	Dysenteria acuta et chronica	70	3	100	6							
	Colica	10	0	27	0							
	Obstipatio	179	5	157	0							
	Hœmorrhois	16	0	15	0	386	13	502	12	888	25	2 ·815
	Enteritis	3	0	0	0							
	Peritonitis	4	1	7	0							
	Gastritis	1	0	2	0							
	Dyspepsia	8	0	19	0							
	Hepatitis acuta et chronica	100	8	116	8	100	8	116	8	216	16	7 ·407
Diseases of the Lungs and Heart	Catarrhus	34	3	58	3							
	Asthma	7	2	10	1							
	Phthisis pulmonalis	11	6	9	2							
	Hœmoptysis	3	0	5	0							
	Pleuritis	5	0	8	0	75	12	115	11	190	23	12 ·105
	Pneumonia	7	1	21	4							
	Palpitatio	5	0	2	0							
	Dyspnœa	3	0	2	1							
Diseases of the Brain	Apoplexia	1	1	1	0							
	Epilepsia	8	0	19	0							
	Paralysis	8	1	9	0							
	Cephalalgia	32	3	36	2	228	19	226	7	454	26	5 ·726
	Amentia	4	1	4	0							
	Mania	18	3	18	1							
	Delirium Tremens et Ebrietas	157	10	139	4							
Do of the Eye	Morbi Oculorum	36	0	28	0	36	0	28	0	64	0	0 ·0
„ Skin	„ Cutis	45	1	26	0	45	1	26	0	71	1	1 ·408
Eruptive Fevers	Variola	7	3	3	0							
	Varicella	11	0	1	0							
	Rubeola	5	0	0	0	25	3	5	0	30	3	10 ·0
	Erysipelas	2	0	1	0							
Dropsies	Anasarca	15	3	8	3	19	4	8	3	27	7	25 ·925
	Ascites	4	1	0	0							
Rheumatic affections	Rheumatismus acutus et chronicus	115	4	103	3	115	4	103	3	218	7	3 ·211
Venereal affections	Syphilis primitiva	45	2	70	1							
	„ consecutiva	11	0	16	1							
	Gonorrhœa	104	0	62	0	189	2	176	3	365	5	1 ·369
	Hernia Humoralis	24	0	23	0							
	Strictura (urethræ)	5	0	5	1							
Specific Diseases	Atrophia	9	2	5	3							
	Lepra	1	0	0	0							
	Dracunculus	0	0	0	0	17	2	12	3	29	5	17 ·241
	Scrophula	6	0	2	0							
	Scorbutus	1	0	5	0							
	Phlogosis	170	1	186	2	170	1	186	2	356	3	0 ·842
	Wounds and Injuries	110	1	124	2	110	1	124	2	234	3	1 ·282
	Other Diseases	113	4	123	6	113	4	123	6	236	10	4 ·237
	Total	1,817	89	2,016	92	1,817	89	2,016	92	3,833	181	4 ·722

PRESIDENCY GENERAL HOSPITAL.

No. 2.—*Table exhibiting the number of Admissions and Deaths from each class of Disease for* 10 *years.*

NATIVE TROOPS.

CLASSES.	DISEASES.	Years 1829 to 1838, inclusive. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Admissions and Deaths from each Class of Disease. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Total admissions from each Class.	Total Deaths from each Class.	Average per-centage of Deaths to Sick.
Fevers	Febris ephemera	144	0	241	3							
	„ intermitt. quotid.	89	1	79	3							
	„ „ tertian.	7	1	3	0	279	7	366	8	645	15	2 ·325
	„ remittens	11	1	16	1							
	„ continua	28	4	27	1							
	Cholera	2	2	23	19	2	2	23	19	25	21	84 ·0
Diseases of the Abdominal viscera	Diarrhœa	74	5	102	12							
	Dysenteria acuta et chronica	16	1	19	3							
	Colica	6	0	10	0							
	Obstipatio	56	0	50	2							
	Hæmorrhois	3	0	6	0	168	8	196	17	364	25	6 ·868
	Enteritis	1	1	1	0							
	Peritonitis	1	0	0	0							
	Gastritis	0	0	1	0							
	Dyspepsia	11	1	7	0							
	Hepatitis acuta et chronica	3	1	2	1	3	1	2	1	5	2	40 ·0
Diseases of the Lungs and Heart	Catarrhus	32	2	12	3							
	Asthma	7	0	0	0							
	Phthisis pulmonalis	9	0	4	2							
	Hæmoptysis	0	0	1	0	52	4	23	7	75	11	14 ·666
	Pleuritis	1	1	0	0							
	Pneumonia	3	1	5	2							
	Palpitatio	0	0	1	0							
Diseases of the Brain	Epilepsia	2	0	5	0							
	Paralysis	18	2	7	1							
	Cephalalgia	8	0	9	0							
	Amentia	4	0	3	2	63	5	45	4	108	9	8 ·333
	Mania	29	2	21	1							
	Hydrophobia	1	1	0	0							
	Delirium Tremens et Ebrietas	1	0	0	0							
Do. of the Eye	Morbi Oculorum	37	0	33	0	37	0	33	0	70	0	0 ·0
„ Skin	„ Cutis	66	0	32	0	66	0	32	0	98	0	0 ·0
Eruptive Fevers	Variola	0	0	1	0							
	Varicella	1	0	3	0	3	0	4	0	7	0	0 ·0
	Erysipelas	2	0	0	0							
Dropsies	Anasarca	34	9	12	4							
	Ascites	4	1	1	1	39	11	14	6	53	17	32 ·075
	Hydrothorax	1	1	1	1							
Rheumatic affections	Rheumatismus acutus	347	6	217	6	347	6	217	6	564	12	2 ·127
	chronicus											
Venereal affections	Syphilis primitiva	60	0	56	0							
	„ consecutiva	10	0	9	0							
	Gonorrhœa	26	0	23	0	108	0	106	0	214	0	0 ·0
	Hernia Humoralis	12	0	16	0							
	Strictura (urethræ)	0	0	2	0							
Specific Diseases	Atrophia	61	3	39	7							
	Beriberi	3	0	0	0							
	Lepra	5	0	0	0							
	Dracunculus	40	0	5	0	114	3	50	7	164	10	6 ·097
	Scrophula	5	0	6	0							
	Scorbutus	0	0	0	0							
	Phlogosis	269	3	221	4	269	3	221	4	490	7	1 ·428
	Wounds and Injuries	155	4	156	4	155	4	156	4	311	8	2 ·572
	Other Diseases	93	4	80	6	93	4	80	6	173	10	5 ·780
	Total	1,798	58	1,568	89	1,798	58	1,568	89	3,366	147	4 ·367

MADRAS. 35 MADRAS. 36

GENERAL HOSPITAL.

No. 2.—*Table exhibiting the Number of Admissions and Deaths from each Class of Disease for* 10 *years.*

CIVIL EUROPEANS.

CLASSES.	DISEASES.	From 1829 to 1838, inclusive. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Admissions and Deaths from each class of Diseases. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Total admissions from each Class.	Total deaths from each Class.	Average percentage of Deaths to Sick.
Fevers	Febris ephemera	60	0	56	3	87	4	112	13	199	17	8 ·542
	„ intermitt. quot.	10	0	25	1							
	„ „ tertian	2	0	3	0							
	„ remittens	3	2	10	4							
	„ continua	12	2	18	5							
	Cholera	8	4	10	7	8	4	10	7	18	11	61 ·111
Diseases of the Abdominal viscera	Diarrhœa	57	6	97	4	180	17	237	20	417	37	8 ·872
	Dysenteria acuta et chronica	23	8	49	13							
	Colica	6	1	6	0							
	Obstipatio	74	0	64	2							
	Hœmorrhois	7	0	3	0							
	Enteritis	2	1	1	0							
	Peritonitis	5	1	2	1							
	Dyspepsia	6	0	15	0							
	Hepatitis Acuta et chronica	12	3	24	1	12	3	24	1	36	4	11 ·111
Diseases of the Lungs and Heart	Catarrhus	17	1	39	2	41	5	63	8	104	13	12 ·500
	Asthma	6	0	4	0							
	Phthisis pulmonalis	9	4	14	5							
	Hœmoptysis	4	0	3	0							
	Pleuritis	1	0	0	0							
	Pneumonia	3	0	0	0							
	Palpitatio	1	0	2	0							
	Dyspnœa	0	0	1	1							
Diseases of the Brain	Epilepsia	2	0	2	0	69	4	59	3	128	7	5 ·468
	Paralysis	7	1	7	3							
	Cephalalgia	12	0	6	0							
	Amentia	5	0	6	0							
	Mania	11	1	14	0							
	Delirium Tremens et Ebrietas	32	2	24	0							
Do. of the Eye	Morbi Oculorum	92	0	114	0	92	0	114	0	206	0	0 ·0
Do. of the Skin	„ Cutis	21	0	21	0	21	0	21	0	42	0	0 ·0
Eruptive fevers	Variola	2	1	0	0	32	1	9	0	41	1	2 ·439
	Varicella	9	0	7	0							
	Rubeola	16	0	0	0							
	Erysipelas	5	0	2	0							
Dropsies	Anasarca	9	1	7	2	11	3	10	5	21	8	38 ·095
	Ascites	2	2	2	2							
	Hydrothorax	0	0	1	1							
Rheumatic affections	Rheumatism. acut. et chronicus	54	2	41	1	54	2	41	1	95	3	3 ·157
Venereal affections	Syphilis primitiva	23	0	30	1	75	2	70	2	145	4	2 ·758
	„ consecutiva	12	1	9	0							
	Gonorrhœa	26	0	23	1							
	Hernia Humoralis	9	0	5	0							
	Strictura (urethræ)	5	1	3	0							
Specific diseases	Atrophia	13	2	5	2	17	2	18	3	35	5	14 ·285
	Elephantiasis	1	0	2	0							
	Lepra	3	0	2	0							
	Dracunculus	0	0	1	0							
	Scrophula	0	0	4	1							
	Scorbutus	0	0	4	0							
	Phlogosis	71	1	66	3	71	1	66	3	137	4	2 ·919
	Wounds and Injuries	55	2	47	1	55	2	47	1	102	3	2 ·941
	Other diseases	103	4	74	5	103	4	74	5	177	9	5 ·084
	Total	928	54	975	72	928	54	975	72	1,903	126	6 ·621

No. 2.—*Table exhibiting the Number of Admissions and Deaths from each Class of Disease for* 10 *years.*

CIVIL NATIVES.

CLASSES.	DISEASES	From 1829 to 1838, inclusive. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Admissions and Deaths from each Class of diseases. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Total admissions from each Class.	Total deaths from each Class.	Average percentage of Deaths to Sick.
Fevers	Febris ephemera	8	0	10	0							
	„ intermitt. quot	3	0	3	0							
	„ „ tertian	1	0	0	0	16	0	15	2	31	2	6 ·451
	„ remittens	0	0	0	0							
	„ continua	4	0	2	2							
	Cholera	13	7	15	13	13	7	15	13	28	20	71 ·438
Diseases of the Abdominal viscera	Diarrhœa	3	0	8	0							
	Dysenteria acuta. et chronica	2	0	5	0							
	Colica	1	0	2	0							
	Obstipatio	5	1	10	0	14	1	26	0	40	1	2 ·500
	Hæmorrhois	2	0	0	0							
	Dyspepsia	1	0	1	0							
	Hepat. acut. et chronica	2	0	0	0	2	0	0	0	2	0	0 ·0
Diseases of the Lungs	Catarrhus	1	1	3	1	2	2	3	1	5	3	60 ·0
	Phthisis pulmonalis	1	1	0	0							
Diseases of the Brain	Cephalalgia	1	1	2	0							
	Paralysis	2	0	1	1							
	Epilepsia	0	0	1	1							
	Amentia	8	1	2	0	24	3	12	3	36	6	16 ·666
	Mania	8	1	3	0							
	Delirium Tremens et Ebrietas	5	0	3	1							
Do. of the Eye	Morbi Oculorum.	1	0	1	0	1	0	1	0	2	0	0 ·0
Do. of the Skin	„ Cutis	4	0	3	0	4	0	3	0	7	0	0 ·0
Eruptive Fevers	Variola	2	0	0	0	4	0	1	0	5	0	0 ·0
	Varicella	2	0	1	0							
Dropsy	Anasarca	2	0	3	1	2	0	3	1	5	1	20 ·0
Rheumatic affections	Rheumatism. acutus et chronicus	16	0	9	0	16	0	9	0	25	0	0 ·0
Venereal affections	Syphilis Primitiva	4	0	8	0							
	Gonorrhœa	3	0	4	0							
	Hernia Humoralis	2	0	1	0	14	0	13	0	27	0	0 ·0
	Strictura (urethræ)	5	0	0	0							
Specific diseases	Atrophia	2	1	0	0	2	1	1	0	3	1	3 ·333
	Scorbutus	0	0	1	0							
	Phlogosis	22	1	28	2	22	1	28	2	50	3	6 ·0
	Wounds and Injuries	168	11	195	16	168	11	195	16	363	27	7 ·438
	Other diseases	22	6	26	5	22	6	26	5	48	11	22 ·916
	Total	326	32	351	43	326	32	351	43	677	75	11 ·078

A few observations on the more important classes of disease are here given.

Fever. *Fever*, the table shows the number and prevalence of each form of fever, the general character of which has been mild and tractable, and the following remarks bear chiefly on the use of Quinine and purgatives, in the treatment of the intermittent and remittent types of that disease, by the surgeon of the institution during the period referred to.

A purgative is usually given on admission followed when there is no irritability of the stomach, by the use of the saline antimonial† mixture; at bed time a *full dose* of calomel (grs. x) is given, and on the least tendency to a remission, whether manifested by diminished frequency of pulse, decrease of temperature, or even a feeling of general improvement on the part of the patient, or any other change however slight, if considered indicative of this condition, quinine is exhibited. The term remission is here used in its relative sense, and however variable in the hour of its occurrence, or indistinct in its manifestation, is the period at which the use of this remedy is commenced. It is given in doses of grs. v. every hour, to the sixth time. The extent to which this medicine is prescribed, has been rendered necessary by the failure of smaller quantities in producing the required effect, and it has consequently been given for some time, in doses considerably larger than appeared necessary on its first introduction into practice, in this country.

In general it is given in the form of pills, diarrhœa having in several instances been found to follow its use when administered in solution, and which has not again recurred when the pills were resumed. In several cases it has produced headache, which was relieved by the patient taking a little arrow-root.

The period of remission is a guide not only for the use of

† Containing one eighth of a grain of the tr.te of antimony, in each ounce.

the quinine, but also for the beneficial exhibition of other remedies, particularly purgatives, for although there cannot be a doubt of their importance in the treatment of this disease, yet it is believed, that the recurrence of paroxysms of fever have been, among other bad effects, distinctly referrible to the irritation produced by the exhibition of them, at ineligible periods.

The invariably deranged state of the secreting and excreting functions in fever, is considered to indicate the use of purgative medicines, and the removal of the accumulations necessarily collecting in the bowels, should be effected, more especially after the first stage of the disease, in the manner least likely to produce irritation or exhaustion; the most eligible period for the exhibition of a purgative is believed to be the commencement of a remission, or intermission, at whatever hour this may take place; and much disappointment has been experienced, in finding the paroxysm of an intermittent, anticipate its usual period of recurrence, or a remittent become almost continued, or more severe in its exacerbation, from the administration of a dose of purgative medicine, without attention to the considerations now laid down, and in such cases it has usually been observed, that the effect of the medicine was suspended, until in an intermittent, the paroxysm had reached its last stage, or been succeeded by approaching apyrexia, or in a remittent fever, until it approached the next usual period of abatement, the paroxysm being at the same time prolonged and the symptoms aggravated.

In one case of a long continued and low remittent fever, attended with a jaundiced state of the skin, and œdema with much debility and which had subsided under the use of quinine, a relapse followed an attempt made to increase the activity of the bowels, and restore the secretions to a more healthy state. The use of quinine again produced its beneficial effects, and a repetition of an active purgative, without reference to the time of exhibition, was a second time followed with a relapse;

the same result, on several occasions, was observed in the same case, before convalescence was confirmed.

The effects now mentioned may be considered more prejudicial, than any likely to result from permitting the bowels to retain their contents, for a limited period, or until the quinine has had time to exert its specific beneficial influence on the system. The debilitating effects of loose watery motions, at a late stage of the disease when the time for depletion has passed, and when exhaustion of the vital energy may be apprehended, are too obvious to require remark.

The administration of calomel in the treatment of these fevers, more immediately in reference to its action on the biliary system, is indicated by the appearance of those symptoms usually termed bilious, manifested by the dusky yellow tinge of the eyes, skin, &c.; when however it is considered that its operation as a purgative, will be likely to produce a degree of irritation, incompatible with the efficacy of the quinine, it is combined with opium, a remedy which although contra-indicated at an earlier stage, when evacuations are required, yet when restlessness is more the effect of nervous debility, than of febrile irritation, its use is attended with beneficial results.

The attempt to restore the diseased visceral secretions to a healthy condition, during the existence of fever, is it will be seen considered of doubtful propriety, and the occurrence of the desired improvement, when it does manifest itself under such treatment, is too readily considered as its effect.

The same remark also applies to blisters, and to those medicines given for the purpose of restoring the secretion of the skin; the utility of the latter (diaphoretics) has however been evident in cases, where their free effects could be produced during a remission, and maintained for a sufficient length of time to be extended to the succeeding paroxysmal period.

It appears therefore, that during the employment of quinine, the stomach, (the natural functions of which are so palpably deranged in fever) ought to be left undisturbed as much as possible; and it is worthy of remark, with regard to this remedy (quinine) that no bad consequences, nor any aggravation of the symptoms, have been observed, even after it has been continued throughout the greater part of an exaçerbation. The treatment after the fever has been subdued, consisted in the exhibition of alterative and laxative medicines, continued while they appeared to be required for the restoration of healthy secretions.

Cholera. *Cholera*, but few cases of this disease have been received into the general hospital, previous to the appearance of the stage of collapse, and a great proportion of them have been in a moribund state on admission; this arises from the generality of the patients not being under control, and therefore not compelled as in military hospitals to apply for aid, at that early period of the disease, when it is most likely to be efficacious; and will fully explain the unusually high ratio of mortality observed in the tables.

The treatment pursued in cases which were in a state to derive benefit from medicine, has been generally calomel in ten, or twenty grain doses, with fifty minims of the tincture of opium; stimulants, as carbonate of ammonia and sulphuric ether, &c., sinapisms and blisters to the epigastrium, and external warmth by heated sand in bags. At one time, the nitric and muriatic acids were exhibited, croton oil and jalap, but not proving successful, this treatment was abandoned.

Dysentery. The principal remedies employed in the treatment of dysentery, have been bloodletting general and topical, ipecacuanha, mercury, castor oil and fomentations.

The propriety of venesection necessarily depends on the strength of the patient, and urgency of the symptoms; the

quantity of blood drawn is regulated by the effects produced by it on the circulation; it has been generally carried to syncope, or until the pulse becomes feeble, a second bleeding has seldom been required, and V. S. is considered admissible only in the very early stage of the acute form of the disease.

Topical depletion is afterwards employed, when the repetition of V. S., may be considered ineligible.

The symptoms requiring the application of leeches, after general bleeding, are local pain, a sensation of heat, or uneasiness of the abdomen upon pressure, and the appearance of any considerable quantity of slime and blood, in the evacuations indicating the existence of inflammation at a stage of the complaint, when it may be of the utmost importance to save as much as possible the strength of the patient; in mild cases, local bleedings alone have been sufficient; and where a patient has been debilitated by former disease, dissipation, or a lengthened residence in the country, the abstraction of blood is unnecessary.

Nauseating doses of ipecacuanha are usually commenced immediately after bleeding, and the operation of a dose of castor oil; and its employment is continued, to the extent of five grains, in combination with an equal quantity of powder of gum arabic, every hour, or second hour, as the patient's stomach may be able to bear it, without inducing vomiting; it is given in the form of pills, and during its use, fluids are sparingly allowed.

The sudorific effect of this medicine is assisted by the application of fomentations to the abdomen, a remedy of the greatest importance, and which appears to be particularly grateful to the patient's feelings, relieving griping and tenesmus.

It is important to remark, that with the relief from griping

and straining, a corresponding improvement in the appearance of the biliary discharge, has generally followed the administration of ipecacuan, and become apparent after a sufficient quantity had been taken to produce nausea.

The *laxative* preferred during the treatment, is castor oil, it has been found to operate with equal efficacy, and less irritation than any other medicine of this class; it is given on admission, and repeated afterwards when indicated by tormina, scanty stools, and *much* straining.

When the evacuations are partly feculent, of a dark or brown-green colour, or of several shades of yellow, mixed with dysenteric discharge; or when they exhibit any of those numerous shades of difference, which are considered as appearances indicating a deficiency, or vitiated quality of the hepatic secretion, mercury is prescribed; a dose of calomel varying from ten to twenty grains is given at bed time, on the evening of admission; and its repetition on the following night, which is the period preferred for exhibiting it, is regulated by the appearance of the hepatic secretion, indicated by the evacuations. When the stools become tinged of a bright yellow colour, notwithstanding the presence of slime or blood, blue pill is substituted in such quantities, and at such intervals, as to induce a continuance of the secretion of the colour alluded to, and is seldom entirely omitted before convalescence.

The use of mercury is entirely regulated by the indications now mentioned, and the quantities exhibited are therefore as various as the states of the biliary secretions.

In cases complicated with hepatic affections, mercury is more freely exhibited, although never carried to the extent of producing ptyalism; and with the exception of one case, in which an unusually small quantity slightly affected the mouth, it has not occurred; the intention having been accomplished in all the other cases, without the salivary glands becoming affected.

Opium except in the form of enema has formed no part of the treatment.

The diet during the treatmcnt of the disease, is strictly of the most unirritating kind, consisting of congee, arrow-root and sago.

Chronic Dysentery. In the chronic form of dysentery, blue pill with ipecacuan, in doses of two or three grains, three times a day, with tonic bitters, and small doses of castor oil, have been the remedies principally used ; strict attention is paid to the regimen, and a flannel band is worn round the body. The result of the treatment in both forms is seen in the foregoing table.

Hepatic Disease. The treatment of hepatic affections has not differed from that usually employed. A great proportion of the cases have been of a chronic nature, occurring in pensioned, or invalided men, or patients arriving from outstations, sent to the Presidency for change of air, which accounts for the number of these complaints, and also for the comparatively large percentage of mortality.

Phthisis Pulmonalis. *Phthisis Pulmonalis*, this disease has been frequently met with in Indo-britons; it has also been seen occasionally in European subjects about the age of puberty, and within the first two or three years after arriving in India, but is of rare occurrence after that period; and, in natives true tubercular phthisis, has comparatively been seldom met with.

Chronic Rheumatism In a chronic form, *rheumatism* constitutes a numerous class of cases, both among Europeans and natives.

Cases of chronic rheumatism, in Europeans have very generally occurred after syphilis, and have been attended with enlargement of the bones and joints, and should more proper-

ly have been entered under the designation of secondary syphilis, than rheumatism; some patients however have been similarly affected, without its being referrible to a venereal origin, but it must here be remarked, that rheumatism has seldom been seen, attended with enlargement of the bones or periosteum, unless after syphilis, or where mercury had been used to a considerable extent, for the cure of other diseases. Most of these cases have occured in old soldiers, few of whom have passed through their period of service, without having repeatedly been placed under the influence of mercury; and it has also been observed, that in scrophulous constitutions, the incautious exhibition of mercury, is of itself productive of symptoms resembling those considered secondary syphilis.

In these cases, the general health is always more or less affected, and the first step in the treatment, is directed to its improvement. In attempting to effect this object, the secretions are regulated by the use of laxative medicine, with alterative doses of blue pill, in combination with ipecacuan and sarsaparilla, aided by gentle tonics; the diet being carefully attended to.

The use of alteratives in such cases is often unnecessarily protracted, their effects being slowly produced are likely to be unobserved, and it must be obvious, that their continued administration may occasion actual disease. The first symptoms of amendment to be expected from alterative medicines are an improvement in the appearance of the tongue, a return of appetite, and regularity of the bowels; the sleep becoming more refreshing, the skin smooth and free from eruption, and the urine copious and of natural colour. When these effects have been produced, the use of the remedies in question may be gradually and safely discontinued; while on the other hand, perseverance in them after having been used for three or four weeks, without beneficial results, appears to be of doubtful propriety and is considered to indicate the necessity of searching for some local affection, as the cause, of the unfavorable symptoms continuing.

With regard to local applications, blisters and liniments being found useful, are very generally employed; opiates at bed time have also been remedies, from which much immediate relief has been experienced; the vapour bath, has been used with considerable benefit, as likewise the tepid bath.

In rheumatic cases where a periodicity in the return of the disease, or in the increase of severity of the pain, is observable, as is perhaps more frequently the case, when it occurs as a sequela of fever, the sulphate of quinine has been used, with marked advantage.

Atrophia. *Atrophia,* under this head have been included, those cachectic cases which have presented themselves in the last stage of ill defined chronic disease; the state indicated having been the effect of long contiuued illness, involving the whole of the natural functions, and producing a degree of emaciation and debility, which appears to be the chief feature of this complaint.

MEDICAL SCHOOL.

Medical School. Attached to the General hospital is the Medical school, an Institution established by Sir Frederick Adam in 1835, for the instruction in Medicine and Surgery of East indians, and natives entering the subordinate medical branch of the service; and which was subsequently, in the year 1838, thrown open to private students or persons not in the public service under the *regulations given below.

* The following Regulations, for the admission of Private Students, or persons not in the Public Service, to the benefits of the course of instruction given at the Medical School, having been approved of by the Right Honorable the Governor in Council, are published for general information.

1. Applicants for admission not to be under 15, nor above 20 years of age.

2. To possess a sufficient knowledge of the English language, and of the other branches of ordinary education, to qualify them for the study; an elementary knowledge of Latin being desirable, but not indispensable.

3. Their qualifications to be ascertained by examination by the Medical Board, after which, if found eligible, their admission will be sanctioned.

4. On being enrolled as students, they are to be subject, exactly in the same manner as those of the Public Service, to all the present rules for the internal conduct of the Institution, and to such others as necessity may suggest, for the class of Pupils to which they belong, for the purpose of securing attention, regular attendance, &c.

The building consists of a theatre or lecture room, a library and museum, and a laboratory. The course of education comprises the study of Materia Medica, and Pharmaceutical chemistry, Anatomy and Physiology, Surgery and the practice of Physic.

The pupils of the public service consist of two classes, viz. Europeans or East indians, and natives: the former being in the grade of "Medical apprentice," and the latter of "Native medical pupil," from which they are promoted to "Assistant apothecary," and "Second dresser," respectively after examination, and strictly according to merit. They are then available for transfer to the various hospitals; and the information respecting the nature and treatment of disease both medical and surgical, imparted to them at the institution renders them valuable hospital assistants.

5. Private students to have access in common with the others, to works of reference belonging to the school, but to provide their own stationery, and books required for private study; all other benefits to be gratuitous.

6. Objectionable conduct to be brought to the notice of the Medical Board, and to subject the students to expulsion, or such other penalty, as may be considered necessary, for the preservation of the discipline of the Institution.

N. B.—As students cannot be admitted to a class after a course of instruction has commenced, it is necessary, that all applicants, should be prepared to enter on their duties with the next Public Class formed subsequently to their admission of which due intimation will, from time to time, be published in the *Fort St. George* Gazette.

By order,

MEDICAL BOARD OFFICE,
25th August, 1838.

(Signed) GEO. PEARSE, M. D.
Secretary Medical Board.

LUNATIC ASYLUM.

Site and description. The Lunatic Asylum, is situated at Kilpauk, a retired part of the environs of Madras, about two miles and a half west from Fort St. George, placed in the middle of an enclosed square piece of ground about thirteen english acres in extent. The ground presents a level surface of turf, with but little vegetation, beyond a few cocoanut trees, at its eastern angles; the situation is rather low, and the soil *deep*, and clayey.

Rules for admission for Patients. The asylum is the only establishment under the Madras presidency intended exclusively for the reception of lunatics, and is adapted for the accommodation of *such insane persons, whether Europeans or Natives*, as from continued mental derangement, may require restraint, and treatment in an institution of the kind. Harmless idiots however, are received into the native infirmary. All military insane persons European or native under ordinary circumstances, are required to be kept for at least three months, from the commencement of their illness, under the immediate charge of the local medical officers throughout the presidency, before being sent to the asylum; and agreeably to the orders of the Honorable the Court of Directors, all Europeans afflicted with insanity, are sent to England with as little delay as circumstances admit of. Insane European officers, during their detention at the presidency, are accommodated in quarters attached to the general hospital, but soldiers are generally kept in the asylum for some time preparatory to their embarkation. In general therefore there are but few European patients at a time in the asylum; its usual inmates chiefly consisting of Indo-britons, and natives, many of the latter being criminal lunatics, sent from the interior.

The building, which is constructed of brick, and terraced, consists of three quadrangles of one story, on the inner sides of which are arranged the apartments, or cells for the patients, each having its door opening into the square, and opposite to it a barred window facing outwards. The

principal square, which was originally intended chiefly for the accommodation of European male patients, has its front to the east; and the two smaller squares, one for female patients, and the other for native male patients, are placed behind it. The whole building is surrounded generally at a distance of about fifty feet, by a curtain wall, nearly six feet high.

The entrance to the great square is on the eastern face, on one side of which the dispensary, offices, and commissariat hospital stores are placed, and on the other are apartments for the resident subordinate medical attendants, and cook-rooms, none of which open into the square. There are twenty-four cells in the large quadrangle, and in the centre of the area, which is about 140 feet square, is a large bath room, amply supplied with water. In each of the two smaller quadrangles are six single cells, and four double ones, and though somewhat smaller than the European cells, they are equally well ventilated. The cells and verandahs of the whole building are floored with square bricks: and to admit of the more ready purification of the apartments, of such patients as are inattentive to cleanliness, the floor of each cell has a slight inclination to one of the angles, on the outward face, where a small circular opening through the wall, gives ready exit to the water used in washing the floor, and it is carried off by drains round the building, keeping the whole perfectly dry.

Extent of accommodations.

The asylum contains fifty six separate apartments for patients; and this accommodation has been found to be sufficiently extensive although a separate cell is invariably allotted to each individual, the number of patients in the institution having, for many years past, but rarely amounted to fifty at any one time.

Long verandahs, and shaded walks in the square, afford convenient space for moderate exercise; but all patients whose cases admit of it, are induced, in favourable weather, to take exercise in the outer enclosure every morning and evening, on a circular walk in front of the asylum.

Observations on the sick treated.

The site of the institution is apparently healthy, for during the last fifteen years no disease has prevailed among its inmates, which could be fairly attributed to its locality.

From what has already been said with regard to the mode of admission of European military insane patients, the rules of the service requiring them to be at least three months under treatment, before they are transferred to the asylum, (in the majority of cases twice this period has elapsed,) and from their remaining but a short time in the institution, its records afford no satisfactory information as to the result of treatment in cases of mental disease, amongst this class of patients. The same rules are attended to in the admission of natives, in whom the acute stage of the disease has also generally passed away, (especially among those not belonging to the service, and who form a large proportion of the admissions) and in such cases the treatment can therefore be but palliative. The prejudices of the people in general prevent *post mortem* examinations being made, and the pathology of mental diseases can therefore be little advanced by this institution.

EYE INFIRMARY.

Site and description of the Eye Infirmary.

The Eye infirmary is situated at the S. W. extremity of Vepery, in a large enclosure adjoining the Poonamallee road. The edifice which has a southern aspect is built of brick and terraced, and consists of a centre and two wings. The centre portion which is two stories high, is the residence of the superintendent; the wing on either side, of one story, forming the wards for the patients; one wing consists of a ward 133 feet long, and 20 broad, capable of containing 103 patients, and the other is divided, into four separate apartments, viz. one for sepoys, a second for high caste natives, a third for inferior grades, and the fourth for all serious cases, particularly those who have undergone any operation; this wing can accommodate 105 patients, so that the whole house is calculated for 208 patients. It is well ventilated by doors, and venetianed windows; and there is an ample supply of good water on the premises. A commodious surgery and rooms for the medical subordinates are attached, also a room for high caste natives to take there food, &c. with cook-rooms, and other conveniences.

From the preceding remarks it will be observed, that the accommodation in the infirmary, properly so called, is exclusively for natives. European patients are accommodated in a ward in the general hospital.

The Eye infirmary was established in 1819, and is open for the reception of European and native soldiers, as well as for Europeans and natives not belonging to the service. The medical charge is vested in the Company's oculist; the duties being conducted under the general supervision of the Superintending surgeon, and of the Medical Board. Assistant surgeons recently arrived from Europe are enjoined to pay every possible attention to the practice in this institution; and they are ordered to attend there frequently, and especially on the day set apart for operations.

The following tables show the number of admissions, cures, &c. in each class of patients Civil and Military, during the nine years, from 1830 to 1838 inclusive, and the nature of the most prevalent diseases.

MILITARY.

	Europeans, admitted.	Discharged.				Natives, admitted.	Discharged.			
		Cured.		Relieved.			Cured.		Relieved.	
		By medical treatmt.	By operation.	By medical treatmt.	By operation.		By medical treatmt.	By operation.	By medical treatmt.	By operation.
Patients with total loss of sight.....	[a] 17	2	4	3	1	[a] 59	5	9	9	4
Do. with partial loss of sight.....	[b] 37	19	0	12	1	[b] 28	11	1	7	0
Do. not included under the two preceding heads.....	[c] 23	21	2	4	0	[c] 12	8	1	0	0
Total admissions.....	77	42	6	19	2	99	24	11	16	4

[a] Amaurosis.....Eur. 2..Nat. 10 [b] Amaurosis..Eur. 9 Nat. 6
Cataract.....Eur. 6..Nat. 10 Cataract.....Eur. 0 Nat. 3
Ophthalmy acute and chronic..Eur. 10 Nat. 3
[c] Ophthalmy acute, chronic, and suppurative...Eur. 16 Nat. 8
Night blindness.....Eur. 4 Nat. 8

CIVIL.

	Europeans, admitted.	Discharged.				Natives, admitted.	Discharged.			
		Cured.		Relieved.			Cured.		Relieved.	
		By medical treatmt.	By operation.	By medical treatmt.	By operation.		By medical treatmt.	By operation.	By medical treatmt.	By operation.
Patients, with total loss of sight.....	[a] 3	1	1	1	0	[a] 672	98	146	131	46
Do. with partial loss of sight	[b] 17	12	0	4	0	[b] 1267	728	9	419	0
Do. not included under the two preceding heads....	[c] 6	6	0	0	0	[c] 926	922	19	26	3
Total admissions....	26	19	1	5	0	2865	1748	174	576	49

[a] Amaurosis....Eur. 0 Nat....71 [b] Amaurosis....Eur. 1 Nat. 582
Cataract.....Eur. 1 Nat.. 289 Cataract.....Eur. 1 Nat. 394
Nebula.....Eur. 2 Nat. 36
Ophthalmy acute and chronic with ulceration of the cornea &c.....Eur. 3 Nat. 33
[c] Ophthalmy acute, chronic, and suppurative...Eur. 5 Nat. 224
Night blindness.....Eur. 0 Nat. 618

OUT PATIENTS.

	* Europeans and Natives, admitted.	Discharged.			
		Cured.		Relieved.	
		By medical treatment.	By operation.	By medical treatment.	By operation.
Patients, with total loss of sight.....	[a] 161	34	34	45	5
Do. with partial loss of sight.....	[b] 341	268	5	72	0
Do. not included under the two preceding heads	[c] 224	237	13	19	1
Total admissions....	726	539	52	136	6

[a] Amaurosis 11..... Cataract 60..... ..

[b] Amaurosis..... ... 85
Cataract incipient..... 51
Ophthalmy acute, chronic, and suppurative, with ulcerated cornea 48
Nebula..... 19
Albugo..... 14

[c] Ophthalmy acute, chronic and suppurative..... 117
Night blindness..... 42

Ophthalmia. In the treatment of this disease the application of the solution of the nitrate of silver, 4 to 8 grains to the ounce of water combined with the free use of the extract of belladona, has been attended very generally with immediate benefit; the latter remedy having been found useful in allaying irritation and pain both in the acute and chronic stages. In one case of *iritis* from injury, it had the effect of lessening the pain and inflammation, after the usual remedies had failed—and its application four times daily, restored the eye to its perfect function, the cornea assuming a healthy appearance, and the pupil recovering its natural size, without any other remedy. In the disease called "*country sore eye*" the application of belladona in the first instance, followed by an ointment containing the nitrate of silver, has been found to have a decided effect in checking the disease.

* The number remaining December 1829 are not included in the column of admissions, which will explain the increase in several of the other columns under the head "discharged."

In several cases of vascularity and ulceration of the cornea, in constitutions of a scrofulous nature, the hydriodate of potash has been used with good effect; after this remedy has been exhibited for some time, the cornea is observed, gradually to become clear, and the ulcer to heal, when the usual stimulating application completes the cure; and in some cases of this nature, where total blindness existed, sight has been restored by this mode of treatment.

Night blindness. *Night Blindness*, is a very prevalent disease in this country, the above tables show that it forms nearly one-fifth of the admissions. It has been found to be principally confined to the native agriculturists and artisans, and is seldom met with in the European, and but rarely in the Indo-briton.

The alleged causes of this disease are, exposure to the strong dazzling light and ardent heat of a tropical sun, by day, and to chilling dews by night, severe attacks of fever, scanty and bad food, a disordered state of the alvine secretions, and worms; females have likewise been frequently observed to be affected with this complaint, after parturition.

This affection is considered by the oculist to be of more importance than is generally admitted, and he is of opinion that many of the cases of amaurosis and cataract treated in the infirmary, have had their commencement in night blindness.

Cataract. Cases of *incipient cataract* were formerly permitted to remain in hospital till the disease became completely formed, or they were operated upon at an early stage of the disease; they are now treated by mercurials, repeated counter irritation, blisters over the brows, local depletion by leeches from the neighbourhood of the eye and the nape of the neck, with repeated moxas and galvanism; by which, in some cases, the opacity disappears, and in others it is so much removed, as to permit the individual to have a useful share of vision, thus obviating in many instances the necessity for operation.

The operation generally preferred in this institution is "*depression;*" as the cornea of the native in most cases either sloughs, or is so slow in uniting, as to require even a stimulus to excite a salutary degree of inflammation, after the operation of "*extraction.*"

Several of the cases treated were those named "Morgagnian cataract;" on opening the capsule, of this form of the disease, the anterior chamber becomes either entirely, or partially filled with a milky fluid; the lenses were generally small, though in some cases they were found to be large and soft. When the lens could be removed from the axis of vision, either by depression or reclination, it was effected; it has been observed that inflammation is more likely to set in, after an operation in this description of cataract, than in any other; should the lens be allowed to remain *in situ*, its absorption gradually takes place, and it ultimately disappears, if the inflammatory symptoms are quickly subdued. A case of congenital cataract of both eyes in a youth of 18 years of age, was operated upon in the year 1831, with complete success.

Diseases of the Cornea. The diseases of the cornea have been numerous; in ulceration with vascularity, the *potassii iodidum* and *quinæ disulphas* have been found most valuable remedies, in combination, or administered separately, according to circumstances. In some of the cases before a healthy action could be produced, the mouth was obliged to be slightly affected with mercury, when the above remedies acted very satisfactorily.

Amaurosis. The majority of this class of cases have been admitted with partial loss of sight, depending principally upon exposure to the sun during the day, and chills during the night; in many instances the result of febrile disease, and inanition succeeding parturition. Strychnia both internally and externally has had a fair trial, but except in two instances it has not been followed with any success; it was carried in these two cases to the extent of one grain, morning and evening.

MALE ORPHAN ASYLUM.

Site and description. This Asylum was established in the year 1784, for the maintenance, support, and education of destitute orphan sons of the European military, on the Madras establishment.

It is situated at Egmore, nearly two miles west from the Fort, in an enclosure of about 20 english acres in extent; the ground having a slight rise towards the site of the building. The soil is a mixture of loam and sand covered with turf, and with the exception of a few trees, there is no other vegetation.

The building is of two stories and terraced, facing due south; the upper story being entirely appropriated for schoolrooms and sleeping apartments, and the lower as a dining room; there is also a large nursery in a separate building for younger children, with every suitable convenience and comfort; baths, &c. being amply provided. The entire building is calculated to contain 380 boys.

The water though abundant is brackish, and can only be used for cooking and bathing; that for drinking is brought from the seven wells in Black-town, formerly described.

A great majority of the inmates of the institution are Indo-britons, very few being of pure European blood; their ages vary from four, to eighteen years.

Hospital. The hospital attached to the institution is a separate building of two stories, terraced, and capable of containing sixty patients. The upper story is set apart for medical cases, and the lower for other diseases, such as itch, ophthalmia, &c.

Diseases. The average annual number of admissions into hospital for ten years,* exclusive of itch, and 3,533 cases of disease of the eye, has been 278; and the average annual number of deaths during the same time, 8; but ex-

* From 1829 to 1838 inclusive.

cluding deaths from cholera, the number is reduced to 5, the average annual strength for the same period being 380. The diseases from which the largest mortality occurred, have been cholera, dysentery, fever, and rubeola of which last 158 cases were treated, with six deaths.

Ophthalmia. *Ophthalmia* has been very prevalent in the institution till within the last few years. In the beginning of the year 1835, the disease became remarkably frequent; and although in many cases it was proved to have arisen from the ordinary exciting causes, it was believed at that time, to have acquired somewhat of a contagious character, justly attributable to the imperfect ventilation of the sleeping apartments, the atmosphere in which was found to be close and sickening, not only at night, but also during the day. The whole building was purified with the chloride of lime, and attention paid to the full and free ventilation of the nurseries, and dormitories; the result of which at the end of three or four months, was highly satisfactory.

Since that time venetian shutters of a green colour, have been placed in the windows, ventilators opened on the roof, and all the rooms of the house painted of a stone colour; and, during the two years, ending December 1838, only 293 cases of ophthalmic disease have been admitted, while in the two preceding years, 1057 were treated.

The general health of the institution has been greatly improved by the same means; for, taking the two first years, and the two last of the period embraced in these remarks, it is found, that 515 admissions occur in the first period, with 16 deaths; and 286, in the second period, with 7 deaths; excluding in both instances, the admissions from diseases of the skin and eye, those of the latter in the first period, amounting to no less than 680.

It is in contemplation to erect a more substantial nursery in place of the present one, which is a pent roof building, and this it is expected will improve still more the health of the inmates of this useful institution.

FEMALE ORPHAN ASYLUM.

Site and description of Asylum.

The sister institution to the preceding was established in the year 1787, and for like benevolent purposes, for the destitute orphan female children, of the European military, on this establishment.

It is situated at Chetputt, a retired part of the suburbs, about four miles directly inland from the Fort, in an equally extensive enclosure of ground, presenting a flat surface of turf, interspersed with a few trees, and surrounded by a hedge. The site is open high and dry, and the soil sandy.

The house is a long building facing the east, two storied and terraced, and capable of accommodating four hundred persons. The school rooms, and dormitories are on the upper story, and the dining hall on the ground floor, as also a very large room for recreation in wet weather; it is well ventilated, light and air being regulated by venetian shutters; and also amply supplied with good water and provided with a comfortable commodious bath room, and other conveniences.

The inmates of this institution are chiefly Indo-britons, the ages varying from *four* to *thirty* years.

Hospital.

The hospital is a separate building of two stories and terraced, facing the south; is well ventilated, and capable of containing thirty patients.

Disease.

The average annual number of admissions into hospital for ten years,* exclusive of diseases of the eye and skin, has been 254; and the annual number of deaths

* From 1829 to 1838 inclusive.

for the same period, scarcely 4; but excluding deaths from cholera, the number is reduced to $2\frac{1}{2}$ annually; the average annual strength during the same time has been 374; thus showing a degree of health scarcely equalled, and certainly not surpassed in any establishment of the kind in Europe.

The most fatal diseases have been cholera, dysentery, and fever, as in the other institution.

The diet in the two establishments, during the period embraced by these remarks, has been equally good, well regulated and varied; so that the cause of the difference in the health and mortality in the one institution, compared with the other, cannot be looked for in the quality or nature of the food; it is thought to be correctly attributed, to the greater exposure of the inmates of the one, to the ordinary exciting causes of disease, from the natural habits of the boys, and the consequent greater amount of febrile disease amongst them, of a more acute nature; and the impaired constitutions of the boys from the badly ventilated state of the Male Asylum, previous to the year 1835 as before adverted to.

The following tables show the amount of febrile and other forms of acute disease, and the mortality attending them in both Asylums, for ten years ending in December 1838.

MALE ASYLUM.	Aggregate strength 3,803. From 1829 to 1838. 1st Half.		2d Half.		Total.		Average annual percentage of sick to strength.	Average percentage of deaths to sick.
	Adm	died	Adm	died	Adm	died		
Fevers	367	5	454	8	821	13	21·588	1·583
Dysentery, acute & chronic	72	2	119	10	191	12	5·022	6·282
Cholera	21	7	52	23	83	30	2·182	36·144
Variola.†	9	1	1	0	10	1	0·262	10·0
Varicella	90	0	3	0	93	0	2·445	0·0
Rubeola	157	6	1	0	158	6	4·154	3·797

FEMALE ASYLUM.	Aggregate strength. 3747. From 1829 to 1838. 1st Half.		2d Half.		Total.		Average annual percentage of sick to strength.	Average percentage of deaths to sick.
	Adm	died	Adm	died	Adm	died		
Fevers	124	4	200	1	324	5	8·646	1·543
Dysentery, acute & chronic	26*	3	35	4	61	7	1·627	11·475
Cholera	11	10	7	3	18	13	0·480	72·222
Variola	0	0	0	0	0	0	0·0	0·0
Varicella	57	0	4	0	61	0	1·627	0·0
Rubeola	85	0	0	0	85	0	2·268	0·0

Having given for each institution a statement of the average results of disease for ten years, it seems necessary to notice here, the influence of unhealthy seasons in increasing both the sickness and mortality. In 1833, from the total want of the periodical rains, the intense heat, and consequent failure of the crops, sickness prevailed to a vast extent throughout the greater part of this presidency; and although the inmates of these institutions did not suffer from any deficiency or want of food, yet they exhibited the influence of that concealed morbid cause, which was acting so very generally, and induced in them a disposition to marasmus, atrophy, cholera, bowel complaints, and scurvy, with a state of system in which the vital powers were much depressed; the

* Worms (lumbrici) were a frequent cause of this disease, and occurred in vast numbers, in several instances; in one the intestines appeared filled with them, and they were found even in the stomach and æsophagus; and in another case 460 were removed from the body of a small child.

†At one time during the prevalence of small pox, when vaccination was had recourse to, to check its progress, the following case occurred, an example of which is not often witnessed, viz. that of the co-existence of the vaccine and variolous disease in the same individual. The subject was a boy, 15 years of age, who was inoculated with the vaccine virus on the 7th of the month; his general health continued pretty good, until the evening of the 11th, when febrile symptoms commenced. The vaccine pustules advanced very slowly but were well marked; on the 17th they had the appearance which that disease commonly presents, on the 7th day; on the 22d the crusts were about falling off. The variolous eruption which was of the confluent kind did not appear till the 16th of the same month, by the 20th the pustules on the surface were fully maturated, and the crusts fell off about the 30th. *The disease proved mild, and the secondary fever was slight and of short duration.*

consequence was a vast increase of sickness and mortality, from the want of that energy so necessary to a successful rallying of the powers of life, after the more violent, and apparently more dangerous symptoms of disease, have been overcome. In that year there were,

In the Male Asylum.			*In the Female Asylum.*		
Adm.	deaths.	strength	Adm.	deaths.	strength
599	*32	374	413	†9	391

* 14 By Cholera.

† 3 By Cholera.

PRISONS.

Site and description of Jails.

The Prisons of Madras are three in number, the Supreme Court; the Convict; and the Police, or Magistrate's jail; all of which are situated in Black-town.

The Supreme Court jail, erected in 1807, stands close to the north wall of the town. It is of a square form, and consists of several buildings, (enclosed by a double wall,) of two stories, for the different classes of prisoners, debtors, criminals, and felons; the upper stories being occupied but not exclusively by Europeans. The apartments are all well ventilated, and kept clean; and there is a spacious piece of ground between the walls, to allow the prisoners to take exercise when necessary; the whole prison is calculated to contain about 100 prisoners.

The hospital is an upper storied, terraced, brick building, situated at the north side of the jail, but quite unconnected with it, being placed in a distinct area, measuring 80 by 40 feet, surrounded by a high wall. It measures 40 feet by 19, and can accommodate twenty patients. The apartments are well ventilated, by doors and windows.

The site of these buildings is rather low, and in the monsoon season much water lodges in the vicinity.

Convict Jail.

The bomb-proofs of one of the bastions on the north rampart of the town form the convict jail; it is situated near the Supreme Court jail, and is exclusively appropriated for natives. The cells or arches, and floors are constructed of granite, the doors and windows all opening into a small central area; the ventilation is therefore from the nature of

the building very imperfect; it is close and confined, and generally very much crowded; yet its inmates, as will be seen below, appear to enjoy good health.

The hospital of this prison is a small pent roof building, at one side of the entrance, and affords accommodation for eight patients; it is not well-ventilated, and on this account any cases of severe disease, which may occur, are removed to the native infirmary.

The Police jail is situated in one of the streets of Blacktown; it is used merely as a temporary prison, and for short periods of confinement, both for Europeans and natives; the cells are all arched, and well ventilated by doors and windows. There is no hospital attached to this jail.

Labour and diet, &c. The native convicts only are sentenced to hard labour, in irons, and work from 6 A. M. till 5 P. M., generally on the roads. They are dieted and clothed by the Commissariat department agreeably to the annexed scale.

Statement shewing the weekly consumption and average cost of provisions and clothing supplied by the Commissariat to each native prisoner in these different jails.

		Rs.	A.	P.			
7	Seers of Rice	0	6	6			
$\frac{21}{100}$	do. of Salt	0	0	1			
$2\frac{2}{20}$	Pollam of Chillies	0	0	3			
$\frac{7}{40}$	do. of Pepper	0	0	1			
$5\frac{1}{4}$	do. of Tamarind	0	0	3			
Curry Stuff		0	0	1			
Curries		0	0	7			
Firewood		0	0	6			
					0	3	4
Clothing, &c					0	0	7
	Total Company's Rupees				0	3	11

Statement shewing the weekly consumption and average cost of diet and clothing supplied by the Commissariat to each European prisoner in these different jails.

lb	Oz.		Rs.	A.	P.			
0	3½	of Tea	0	3	1			
0	7	of Sugar	0	1	1			
2	1¼	of Rice	0	1	0			
14		No. of loaves of Bread, equal to 7 lbs	0	8	9			
P.	D.							
2	4	of Milk	0	2	1			
5¼		lbs. of Mutton	0	10	6			
		Curry Stuff	0	0	6			
		Firewood	0	1	8			
						I	12	8
		Clothing, &c	0	6	2			
		Shoes, Soap, &c	0	2	1			
						0	8	3
		Total Company's Rupees				2	4	11

Diseases. The following table No. 3 shows the amount of disease amongst the convicted prisoners, for a period of ten years, in the Madras Jails; the table includes both Europeans and natives, there being no separate returns, but the proportion of Europeans is very small. The amount of mortality cannot be accurately ascertained, the worst cases of disease, as already noticed, being removed to the native infirmary, and included in the returns of the sick of that institution, the number of transfers is however very trifling, amounting in the period embraced in these remarks only to 52.

BLACK-TOWN JAIL.

No. 3.—*Table exhibiting the Number of Admissions and Deaths of the "Convicted Prisoners," from each Class of Disease for* 10 *years, from* 1829 *to* 1838 *inclusive.*

CLASSES.	DISEASES.	From 1829 to 1838. Aggregate strength 2,730. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Admissions and Deaths from each class of Disease. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Total admissions from each Class.	Total deaths from each Class.	Average annual percentage of sick to strength.	Average per-centage of deaths to sick.
Fevers	Febris ephemera	330	0	500	0								
	„ intermitt. quot.	3	1	3	0								
	„ „ tertian	0	0	0	0	365	2	512	1	877	3	32 ·124	0 ·342
	„ remittens	32	1	9	1								
	„ continua	0	0	0	0								
	Cholera	1	1	11	8	1	1	11	8	12	9	0 ·439	75 ·0
Diseases of the Abdominal viscera	Diarrhœa	118	1	126	0								
	Dysenteria acuta et chronica	20	1	26	0	143	2	163	0	306	2	11 ·208	0 ·653
	Dyspepsia	5	0	11	0								
	Hepatitis acuta et chronica	4	0	2	0	4	0	2	0	6	0	0 ·219	0 ·0
Diseases of the Lungs	Catarrhus	6	1	3	1								
	Asthma	1	0	0	0								
	Phthisis pulmonalis	2	0	1	0	10	1	5	1	15	2	0 ·549	13 ·333
	Pneumonia	1	0	1	0								
Diseases of the Brain	Epilepsia	2	0	0	0								
	Paralysis	2	0	0	0	5	0	0	0	5	0	0 ·183	0 ·0
	Mania	1	0	0	0								
Eruptive fevers	Variola	2	0	3	0								
	Varicella	102	0	40	0	106	0	43	0	149	0	5 ·457	0 ·0
	Rubeola	2	0	0	0								
	Erysipelas	0	0	0	0								
Dropsies	Anasarca	6	0	5	1	6	0	6	1	12	1	0 ·439	8 ·333
	Ascites	0	0	1	0								
Rheumatic affections	Rheumatism. acut. et chronicus.	9	0	10	0	9	0	10	0	19	0	0 ·695	0 ·0
Venereal affections	Syphilis primitiva	6	0	2	0								
	Gonorrhœa	7	0	2	0	19	0	8	0	27	0	0 ·989	0 ·0
	Hernia Humoralis	6	0	4	0								
Specific diseases	Atrophia	14	2	14	5								
	Beriberi	0	0	4	1								
	Lepra	3	0	6	1	32	3	28	7	60	10	2 ·197	16 ·666
	Dracunculus	8	0	0	0								
	Scrophula	7	1	4	0								
Do. of the Eye	Morbi Oculorum	6	0	12	0	6	0	12	0	18	0	0 ·659	0 ·0
Do. of the Skin	„ Cutis	10	0	8	0	10	0	8	0	18	0	0 ·659	0 ·0
	Other diseases	1,518	1	1,727	0	1,518	1	1,727	0	*3,245	1	118 ·864	0 ·030
	Total	2,234	10	2,535	18	2,234	10	2,535	18	4,769	28	174 ·688	0 ·587

* Includes 2,622 cases of Punitio.

Health of the Convicts.

The average annual strength for 10 years, has been 273; and, excluding 2,822 cases of "*Punitio*;"* from the amount of admissions, the average annual number of sick is found to be only 194, or 71 per cent on the strength; the mortality during the same period being 3 annually, and excluding cholera only 2; which is at the rate in the first case of one per cent, on the strength; and only 1½ on the sick treated; and in the latter instance, is only ⅔ per cent, on the strength, and one on the sick treated. It is worthy also of remark that eleven of the fatal cases occurred in 1833. This statement which does not include the results in the 52 cases of acute disease transferred, as before stated, to the native infirmary, shows a surprising degree of health, and this too notwithstanding that the convicts are so badly housed; they are regular however at their daily labour, but not overworked, their diet is good, and in due quantity, and served out to them at stated hours.

* The cases of *Punitio* are never so severe as to unfit the prisoners for labour for more than 24 hours; the number of stripes inflicted being restricted to three dozens, but seldom exceed two dozen.

GARRISON OF FORT ST. GEORGE.

Garrison of Fort St. George European Troops.

The European force stationed at Madras, for many years past, has been one Regiment of Her Majesty's infantry, and two companies of Artillery, all of whom are quartered in Fort St. George, which is an irregular polygon somewhat in the form of a semi-circle, of which the sea face is nearly a diameter, running north and south, and presenting a clear front on that side of five hundred yards. The sea flows to within a few yards of the ramparts, which are fenced by an artificial barrier of stone work from the influence of the surf and tide; the foundation of the works on the sea face contains a series of cisterns, which are filled with fresh water from the wells formerly mentioned, as situated at the northern extremity of Black-town.

The Fort presents a double line of strong fortifications towards the land side, both bombproof; the inner one constructed so as to afford accommodation to a large body of troops, but which is not at present made available for this purpose, except a small portion occupied by the Artillery and occasionally by recruits on arrival from Europe.

Public Offices.

Within the Fort are the offices of Government, and of the various Public departments, and the barracks for the European troops.

Barracks.

The barrack is situated at the north and western extremity, is of an oblong form, its length running north and south; it is terraced and of two stories, and said to be capable of accommodating 1,000 men; the officers occupy the upper, and the men the lower story. The buildings in its vicinity greatly obstruct the access of air and its construction prevents free ventilation, in the lower story especially; for it will be readily perceived, that the eastern range shuts out the sea breeze, from the western, and the western range in like manner precludes the access of the land winds, to the opposite side

of the building; besides, these winds waft the impure air from the windward to the leeward range; *i. e.* when the sea breeze prevails, the atmosphere in the western ranges becomes close and extremely disagreeable; and when the land wind prevails, the eastern side is in a similar state. These defects have been but partially remedied by the improved mode of ventilation recently adopted, viz. air holes cut through the walls near the ceiling, with the view of producing a constant current of air through the apartments. This plan of ventilation, (so common in the hospitals and public institutions in Europe, and first recommended by "Hennen," who also advised similar apertures to be made at the bottom of the wall, the openings of each being covered with an iron plate perforated with small holes, or a wire frame work, to break the force of the wind,) has been found to answer well in buildings of a single range, but it must be evident that in one constructed like these barracks, its efficacy can be but trifling; and the state of the atmosphere in the apartments furnished with the ventilators, has been found to be but little influenced by them, being still very impure.

All the apartments and the area in the centre of the quadrangle are paved with stone, and kept clean. The drains are said to be low and in some measure defective, and consequently impurities sometimes stagnate and give rise to unpleasant odours.

The upper story of the building is divided into separate apartments for the officers and from its elevation it is of course better ventilated.

It has generally been found when a regiment is complete in numbers, that the lower story does not afford sufficient accommodation; there being no parchery,* or other buildings, in the fort for the married men and families, one end of the lower range is therefore given up to them, and two companies are accommodated upstairs.

* A collection of cottages occupied by married soldiers.

It would be advisable perhaps from the circumstances now stated, and also from the European regiments having been increased to 1,000 men each, to remove the officers to some convenient building in the neighbourhood, and give up the entire barrack to the soldiery; this arrangement would add much to the comfort of the troops, and at the same time be conducive to their health.

Duties and employment of the Soldiery.

For the most part, the men are occupied in the ordinary routine peaceable garrison and regimental duties of guards, drills, parades, &c. nor have these latter it is believed been carried to such an extent as to distress them; some of the guard rooms are said to be ill ventilated, and others to afford but an imperfect protection from the effects of the sun.

The time of the soldier when off duty being his own, and having no employment it becomes irksome to him and passes heavily away; and the tedium of having nothing to do, but too frequently leads to bad habits and intemperance, and his daily allowance of spirits (six ounces) is exceeded on every opportunity; to prevent the baneful consequences of idleness, a reading room or library has been lately opened which there is every reason to believe will be attended with good effects; it would be advisable also to employ the soldier in handicraft, such as making of shoes, shirts, stockings, stocks, &c.; these observations are here introduced from observing the very partial influence, the institution of temperance societies, has as yet exerted in European regiments, in India.

Diet.

As to the diet of the men, it has always been unexceptionable both in quantity, and quality, but the allowance of animal food (one pound of meat daily), is perhaps too large.

The hospital has been described in the account already given of the general hospital, one half of which is appropriated for the sick of Her Majesty's regiment. In seasons of severe sickness, or when Cholera occurs, its distance from the

barracks (about half a mile) has been found to be very inconvenient.

Diseases of European Troops. The most fatal diseases have been *cholera, dysentery, hepatitis,* and *fever.*

The exciting causes of these diseases, assigned by the medical officers, are the general influence of the increased temperature of a tropical climate, upon the European constitution; exposure to the ardent heat of the sun; the effects of the scorching winds during a part of the year, and heavy dews by night, at other seasons; the badly ventilated state of the barracks and guard rooms; and, the intemperate habits of the men.

The general table of European military sick, shows the nature, and amount of disease, and mortality during a period of 10 years from 1829, to 1838 inclusive; but, as it includes also, the sick of the Honorable Company's European Artillery the following table comprising only that of Her Majesty's regiments, stationed in this garrison is given for 7 years, from 1832, to 1838 inclusive.

DISEASES.	Average strength 579. Aggregate strength 4055.				Total admissions.	Total deaths.	Average annual percentage of sick to strength.	Average percentage of deaths to sick.
	1st Half.		2d Half.					
	Adm	died	Adm	died				
Fevers	975	6	769	4	* 1741	10	43·008	0·573
Cholera	38	12	73	36	111	48	2·737	43·243
Diarrhœa	231	0	338	4	569	4	14·032	0·703
Dysenteria acuta	369	18	714	36	1083	54	26·707	4·986
„ Chronica.	34	3	30	3	64	6	1·578	9·375
Hepatitis acuta	227	7	227	9	454	16	11·196	3·524
„ Chronica.	57	4	46	3	103	7	2·540	6·796
Catarrhus	242	1	286	0	528	1	13·020	0·189
Phthisis pulmonalis	3	1	4	4	7	5	0·172	71·428
Hœmoptysis	11	0	7	1	18	1	0·443	5·555
Pneumonia	49	1	68	3	117	4	2·885	3·418
Rheumatism acutus	239	0	267	0	506	0	12·478	0·0
„ Chronicus.	83	0	75	0	158	0	3·896	0·0
Other diseases	2405	12	2490	9	4895	21	120·715	0·429
Total	4963	65	5394	112	10357	177	255·413	1·708

* Ephemeral.. 76 .... Remittent 2.
Intermitt... 10..... Continued 1656.

Fevers. In the foregoing table, the class "Fevers" will be observed to form one-sixth of the whole admissions, the continued, and ephemeral being the most prevalent forms; the fact that the amouut of mortality, is only one death, in every one hundred and seventy-four patients treated, sufficiently shews the very tractable nature of these diseases.

Diseases of this class are generally presented early for treatment, the head-ache, with the overpowering lassitude, and weakness, and general feeling of soreness over the body, with which they commence, prostrate the patient at once, incapacitate him from the performance of his duty, and compel him to seek for relief. The fever most prevalent here is the continued, which, in the early stage is easily cut short, and the disease may almost always be subdued by a general bleeding, or the application of leeches to the temples when requisite, and in other instances without these measures, by an active purgative aided by 4, or 5 grains of calomel, and an equal quantity of James's powder at bed time, followed up next day by the saline antimonial solution. The blood in such cases is seldom buffed, but the crassamentum is always firm.

Continued Fever. Cases however of continued fever of a severe form occur, in which, when the symptoms have been allowed to go on for a day or two unchecked, some important organ becomes involved, the brain and liver in particular at this station being liable to be effected, and congestion may exist in either or both of these organs on the admission of the patient. Such cases, of what may be called the congestive form of fever, require much discrimination and tact in the treatment; general bleeding should be less freely practiced, but the local abstraction of blood is urgently required, by which, with free purging and the judicious use of mercury, to obtain its anti-inflammatory action on the system and equalising effect on the circulation, the local complication is removed, and the inflammatory state of the system subdued; the mercury is best given for

this purpose in the form of calomel in four grain doses, as before mentioned, with the same quantity of James's powder, and repeated three or four times daily. In such cases it has been frequently observed, that the symptoms within a few days assume a typhoid type, with a dark dry tongue, and a petechial skin, but in no instance has the disease acquired the contagious property of the typhus of Europe, although in many other respects it may be said to be the same disease; its duration seldom exceeds 7 or 8 days, but a comatose state, as in typhus, precedes death.

Remittent & Intermittent Fevers.

The *remittent* and *intermittent forms of fever* will be observed to be of rare occurrence at Madras, two of the first, and ten of the second type having only been recorded by the medical officers of Her Majesty's service in the whole number of this class, 1744; the sources of these fevers, are not found to exist in a virulent or extensive degree in or near Madras, and the greater number of the cases which are entered in the tables of the sick of the General hospital, European and native, have been transferred from out stations, or were received from on board-ship, from Bombay, Calcutta and the eastern ports.

Cholera.

Cholera, it will be observed has been attended with its usual high rate of mortality, it has occasioned fully a fourth part of all the deaths; nothing particular has been remarked in the treatment; latterly warm saline enemata, frequently exhibited, as recommended by Dr. Murray Inspector of H. M.'s hospitals, have been thought beneficial in rousing the system from the collapsed state, and in many instances, it has contributed essentially to the recovery of the patient. Quinine in ten grain doses given before the stage of collapse set in, has had in many instances a good effect in checking the course of the disease.

Dysentery.

Dysentery, forms nearly a tenth part of the whole admissions, and the mortality caused by it, amounts to a third part of all the deaths; the ratio of mortality from this disease on the sick treated, is about 5 per cent, and it is worthy of remark that during the seven years included in

the foregoing tables it has been steadily at the same ratio, except in 1834 when it amounted to fully 10 per cent.

Fortunate indeed would it be for the soldier, and greatly less harassing to the anxious mind of the physician, were this disease ushered in with less equivocal symptoms than it often is. In numerous instances, and in many of the fatal cases, it has been noted, that the patients had been going about, suffering under the disease for four, five and six days, and apparently not aware of their dangerous state; and in many of them it has been observed, that febrile symptoms, neither preceded, nor attended the disease throughout its whole course; and generally when fever was present it was slight.

The porportion of cases complicated with hepatic disease, cannot be ascertained, but they are known to have been of very frequent occurrence, and abscess in the liver has been found occasionally after death.

The treatment by the several medical officers of Her Majesty's regiments, during the time included in these remarks, has varied but little; and consisted of general and local bleeding, calomel and ipecacuan, each in five or ten grain doses, three times daily, with or without opium; blue pill having been occasionally substituted for the calomel; oily laxatives; blisters and antimonial ointment to the abdomen; the patient being restricted to a low mild diet; and tonics exhibited during convalescence. The greatest number of cases of this disease and diarrhœa have occurred at the beginning of, and during the wet season.

Hepatitis. *Hepatitis*, is next in importance, the proportion of cases being about a twenty-third part of all the admissions; and an eighth part of all the mortality being occasioned by it. When early presented for treatment, it has been in general easily removed by depletion, general and local; purgatives; and mercury continued till its specific effect on the system was produced. When the untoward termination in abscess

has taken place, which in most instances can be easily recognised from the history of the case, attention to the constitutional symptoms, and the persistence of tension over the epigastric space; an early and free exit to the matter, before the strength of the patient has become much sunk, is of great importance; the mode of puncturing the liver recommended, and adopted by the late Doctor Murray, bids fair to be of advantage in such cases; he employed a long flat trocar, which he introduced between the cartilages of the 7th, 8th or 9th ribs or epigastrum as circumstances pointed out; occasionally an exploratory needle (a very small, flat, canular instrument) having been previously introduced to ascertain the presence of matter; in no case even in those where an abscess had not been present, has either the puncture of the needle, or the wound of the trocar been followed with peritonitic inflammation, or effusion into the abdomen either of blood, or pus; adhesive inflammation appearing from post mortem examinations to have been excited within twenty-four hours, round the aperture; and by keeping the canula inserted for that length of time all chance of the escape of matter into the abdomen is averted; further it is observed, that the peculiar function of the abdominal muscles, which is to keep the viscera in constant contact with each other, tends greatly to prevent effusion from any collapse of the liver, on the evacuation of the contents of an abscess. Within the last few years, Dr. Murray operated in 17 cases without any bad consequences following, and six of his patients have recovered. By giving an early exit to the matter and employing the necessary constitutional treatment (such as mild alteratives with tonics, and counter irritation,) the chances of recovery are much increased. In cases where more than one abscess may exist, it has been objected, that this operation must be ineffectual; but it cannot be more so, than a delay in waiting till they enlarge or coalesce, on the contrary it is highly probable that the evacuation of one, may lead to the pointing of the others towards the emptied cyst.

Diseases of the Chest.

The diseases of the chest will be observed to be rather numerous, but the mortality except from

phthisis is not great, in these cases the disease had been excited either in Europe, or in New South Wales, from whence H. M.'s regiments frequently arrive.

It would have been desirable to have contrasted the sickness and mortality of the European Artillery stationed in the Fort, with that in H. M.'s regiments, but this cannot be accomplished, as the sick of the Artillery are treated in the general hospital, and embodied in the returns of that institution. It is generally acknowledged however, that they are more healthy, from their quarters being more airy, and the nature of their duties requiring less exposure either by day or night.

General remarks on the table of European military sick.

The general table No. 4 of European military sick for ten years, which includes those of Her Majesty's regiments, the Artillery, Ordnance department, Artificers, which latter with the Non-Commissioned Staff of the garrison, are treated in the general hospital, will shew clearly the total amount of sickness and mortality from the most important diseases, during that period, for each half year, with the percentage of sick to strength, and deaths to disease.

It will be observed that a considerable increase in both sickness and mortality, occur during the second half of the year, being caused principally by cholera, diarrhœa, dysentery.

The average annual percentage of sick, to strength, has been 186; of mortality, to sick treated, $2\frac{1}{3}$; of deaths, to strength, $4\frac{1}{4}$ annually, which proportions have been pretty uniform throughout the whole period; in 1837, the proportion of deaths to strength, is double the average now stated, the increase of the mortality that year having been occasioned by cholera.

The nomenclature of diseases having been altered and enlarged in 1833, by order of the Medical Board another

more comprehensive table No. 5 is appended exhibiting the specific diseases in each of the classes therein mentioned, during a period of five years, from 1834, to 1838 inclusive. The total of each class of disease is shewn, with the mortality, and the percentage of admissions to the strength, and of deaths to the number treated.

The most numerous admissions have been from the class of *fevers, abdominal complaints, venereal, rheumatism,* and *diseases of the liver,* of the *lungs* and of the *brain;* and the greatest mortality has been caused by *cholera,* (which is kept distinct in the table, and placed next to the class of fevers) *liver,* and *bowel complaints, diseases of the lungs,* and *dropsies,* the average percentage of sick to strength, during these five years, being 221, and of deaths to sick treated, about $\frac{2}{10}$th; of deaths to strength 4·895.

The sickness and mortality amongst the officers has been very small, as the following table shews; it comprises seven complete years.

OFFICERS OF HER MAJESTY'S REGIMENTS.

CLASSES.	DISEASES.	Aggregate strength 207.		Admissions and deaths from each class of disease.		Average annual percentage of sick to strength.		Average percentage of deaths to sick.	
		Adm.	died	Adm.	died				
Fevers	Febris ephemera	1	0	93	3	44	·927	3	·225
	„ remittens	2	0						
	„ continua	90	3						
	Cholera	2	0	2	0	0	·966	0	·0
Diseases of the Abdominal viscera	Diarrhœa	11	0	78	2	37	·681	2	·564
	Dysenteria acuta et chronica	11	0						
	Colica	15	0						
	Obstipatio	9	1						
	Hæmorrhois	6	0						
	Enteritis	2	1						
	Dyspepsia	17	0						
	Hepat. ac. et chron.	15	0	15	0	7	·245	0	·0
Do. Lungs	Catarrhus	37	0	39	0	18	·240	0	·0
	Hæmoptysis	1	0						
	Pleuritis	1	0						
Do. Brain	Apoplexia	2	2	12	2	5	·797	16	·666
	Epilepsia	8	0						
	Paralysis	1	0						
	Delirium Tremens et Ebrietas	1	0						
Do. Eye	Morbi Oculorum	2	0	2	0	0	·966	0	·0
Do. Skin	„ Cutis	2	0	2	0	0	·966	0	·0
Rheumatic affections	Rheumatism acutus et chronicus	16	0	16	0	7	·729	0	·0
Venereal affections	Syphilis Primitiva	12	0	23	0	16	·908	0	·0
	Gonorrhœa	18	0						
	Hernia Humoralis	5	0						
Other diseases		115	0	115	0	55	·555	0	·0
Total		409	7	409	7	197	·384	1	·711

It may be useful also to notice here, the diseases of the women and children. A table for the same period has been framed shewing the average strength, and the nature, and amount of disease, with the mortality amongst them.

WOMEN.

CLASSES.	DISEASES.	Aggregate strength 819.		Admissions and deaths from each class of disease.		Average annual percentage of sick to strength.		Average percentage of deaths to sick.	
		Adm.	died	Adm.	died				
Fevers	Febris ephemera	3	0	202	2	38	·921	0	·990
	„ intermitt.	1	0						
	„ continua	199	2						
	Cholera	11	6	11	6	2	·119	54	·545
Diseases of the Abdominal viscera	Diarrhœa	145	1	450	13	88	·632	2	·826
	Dysenteria acuta et chronica	101	11						
	Colica	28	0						
	Obstipatio	162	0						
	Enteritis	2	1						
	Dyspepsia	24	0						
	Hepatitis acuta et chronica	22	1	22	1	4	·238	4	·545
Do. Lungs	Catarrhus	51	1	62	2	11	·945	3	·225
	Phthisis pulmonalis	2	1						
	Pneumonia	7	0						
	Dyspnœa	2	0						
Do. Brain	Apoplexia	1	0	21	1	4	·046	4	·762
	Amentia	1	1						
	Epilepsia	1	0						
	Hysteria	4	0						
	Delirium Tremens et Ebrietas	14	0						
Do. Eye	Morbi Oculorum	27	0	27	0	5	·202	0	·0
Do. Skin	„ Cutis	16	0	16	0	3	·082	0	·0
Dropsy	Anasarca	1	0	1	0	0	·122	0	·0
Rheumatic affections	Rheumatism acutus et chronicus	13	0	13	0	5	·048	0	·0
	Leucorrhœa	3	0	3	0	0	·579	0	·0
	Other diseases	231	1	231	1	43	·736	0	·440
Total		1055	26	1055	26	209	·202	2	·441

CHILDREN.

CLASSES.	DISEASES.	Aggregate strength 970.		Admissions and deaths from each class of disease.		Average annual percentage of sick to strength.		Average percentage of deaths to sick.	
		Adm.	died	Adm.	died				
Fevers	Febris ephemera	16	0	248	11	25	·567	4	·435
	„ intermitt.	4	0						
	„ remittens	62	9						
	„ continua	166	2						
	Cholera	11	9	11	9	1	·134	81	·818
Diseases of the Abdominal viscera	Diarrhœa	374	23	646	65	66	·597	10	·061
	Dysenteria acuta et chronica	175	15						
	Obstipatio	66	1						
	Tabes mesenteric.	31	26						
	Hepatitis acuta et chronica	5	0	5	0	0	·535	0	·0
Do. Lungs & Heart	Catarrhus	52	0	120	10	12	·371	8	·333
	Pneumonia	16	2						
	Carditis	2	0						
	Dyspnœa	8	8						
	Pertussis	2	0						
Do. Brain	Paralysis	0	0	15	13	1	·546	86	·666
	Tetanus	1	0						
	Convulsio	14	13						
Do. Eye	Morbi Oculorum	175	0	175	0	18	·041	0	·0
Do. Skin	„ Cutis	24	0	24	0	2	·474	0	·0
Eruptive fevers	Varicella	2	0	106	1	10	·927	0	·943
	Rubeola	103	1						
	Marasmus	43	0	43	0	4	·433	0	·0
Rheumatic affections	Rheumatism acutus et chronica	7	0	7	0	0	·721	0	·0
Worms	Tineæ	74	0	86	0	8	·866	0	·0
	Vermes intest.	12	0						
	Other diseases	997	6	997	6	99	·618	6	·020
Total		1793	115	1793	115	183	·814	6	·448

PRESIDENCY DIVISION.

No. 4—*Return of Sick of the European Troops exhibiting the half Yearly Admissions and Deaths from the principal diseases, and those which have been either Epidemic or Endemic, during the period of ten Years—from* 1829, *to* 1838 *inclusive.*

Years.		Admissions and Deaths.	Diseases. Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	" continued.	" intermittent.	" remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds and Injuries.	Other Complaints.	Average strength each year.	Average percentage of sick to strength.	Annual percentage of death to sick treated.	Annual percentage of deaths to strength.
1829	Admitted.... 1st half	1,111	0	0	0	33	0	0	57	121	0	0	77	8	33	0	76	0	0	75	49	0	79	20	0	93	390	2,002	131 ·468	2·013	2·647
	2d "	1,521	2	0	0	26	0	0	51	136	0	0	116	11	2	0	103	2	0	100	64	0	127	21	0	116	644				
	Died..... 1st half	24	0	0	0	4	0	0	0	5	0	0	1	1	1	0	4	0	0	0	1	0	0	5	0	0	2				
	2d "	29	1	0	0	5	0	0	1	10	0	0	2	0	0	0	3	0	0	0	1	0	1	0	0	1	4				
1830	Admitted.... 1st half	1,403	0	0	0	40	0	0	40	83	0	0	52	31	5	0	134	7	0	69	56	0	101	16	0	105	661	2,433	161 ·282	1·738	2·836
	2d "	2,521	1	0	0	53	0	0	152	302	0	49	186	24	13	0	168	2	0	135	70	0	116	22	0	159	1,069				
	Died..... 1st half	32	0	0	0	4	0	0	1	2	0	0	0	2	0	0	8	0	0	0	1	0	0	1	0	0	13				
	2d "	37	0	0	0	1	0	0	2	13	0	0	1	2	0	0	9	0	0	0	0	0	0	2	0	1	6				
1831	Admitted.... 1st half	1,710	2	0	0	7	0	0	72	124	0	44	129	13	14	0	124	5	0	40	77	0	145	29	0	87	806	2,006	188 ·185	3·205	6·031
	2d "	2,056	3	0	0	71	0	0	195	223	0	48	261	22	26	0	116	2	0	75	78	0	132	37	0	122	625				
	Died..... 1st half	41	2	0	0	3	0	0	0	7	0	0	3	1	1	0	4	0	0	0	1	0	2	3	0	0	16				
	2d "	80	2	0	0	37	0	0	2	14	0	0	2	0	1	0	9	0	0	0	0	0	0	6	0	0	7				
1832	Admitted.... 1st half	1,262	0	0	0	0	0	0	36	81	0	28	120	3	77	0	105	4	0	87	53	0	94	31	0	74	469	1,556	174 ·293	2·396	4·177
	2d "	1,450	2	0	0	34	0	0	81	136	0	71	152	15	31	0	83	11	0	63	59	0	101	42	0	90	479				
	Died..... 1st half	22	0	0	0	0	0	0	0	5	0	0	0	0	0	0	8	1	0	0	1	0	0	1	0	0	6				
	2d "	45	1	0	0	18	0	0	2	3	0	0	2	0	0	0	5	0	0	0	0	0	1	3	0	0	8				
1833	Admitted.... 1st half	1,369	3	0	0	20	0	0	64	74	0	28	116	33	20	0	122	8	0	69	80	0	160	34	0	105	424	1,470	205 ·986	2·344	4·829
	2d "	1,668	1	0	0	16	0	0	67	193	0	56	132	7	30	0	96	6	0	74	73	0	254	17	0	121	523				
	Died..... 1st half	33	3	0	0	5	0	0	1	2	0	0	0	3	0	0	7	1	0	0	0	0	1	1	0	0	6				
	2d "	38	0	0	0	10	0	0	1	8	0	1	3	0	2	0	3	0	0	0	0	0	0	1	0	2	7				
1834	Admitted.... 1st half	1,372	2	1	0	0	6	23	58	34	0	57	355	7	5	0	45	4	0	35	52	0	217	51	0	91	296	1,020	245 ·699	2·282	5·631
	2d "	1,169	1	1	0	2	4	36	65	210	0	38	181	15	0	0	42	3	0	28	61	0	241	65	0	22	155				
	Died..... 1st half	10	2	1	0	0	0	0	0	4	0	0	1	0	0	0	2	0	0	0	0	0	0	2	0	1	1				
	2d "	39	1	1	0	1	0	0	1	21	0	1	1	1	0	0	7	0	0	0	0	0	0	2	0	1	1				
1835	Admitted.... 1st half	795	0	0	0	7	1	36	29	51	0	6	99	10	1	0	47	4	0	34	63	0	156	23	0	22	194	894	191 ·834	2·215	4·250
	2d "	919	0	0	0	7	1	54	37	76	0	5	79	3	0	0	69	1	0	25	75	0	170	68	0	45	207				
	Died..... 1st half	16	0	0	0	1	0	1	2	3	0	0	1	0	0	0	3	0	0	0	0	0	0	2	0	0	3				
	2d "	22	0	0	0	0	0	1	1	5	0	0	0	0	0	0	2	0	0	1	1	0	1	4	0	1	5				
1836	Admitted.... 1st half	858	1	0	0	5	17	52	12	66	0	8	70	13	0	0	81	2	0	27	74	0	160	46	0	31	165	860	219 ·368	1·199	2·631
	2d "	1,226	0	0	0	0	10	54	35	185	0	7	69	2	0	0	113	4	0	57	112	0	154	61	0	66	269				
	Died..... 1st half	11	1	0	0	0	0	2	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0	0	1				
	2d "	14	0	0	0	0	0	0	1	6	0	0	0	0	0	0	3	0	0	0	0	0	1	0	0	0	2				
1837	Admitted.... 1st half	1,046	0	2	0	14	7	61	43	129	0	3	52	6	1	0	95	3	0	31	100	0	164	80	0	49	226	886	215 ·011	3·937	8·465
	2d "	859	0	0	0	52	6	84	110	63	0	17	62	2	0	0	50	5	0	16	69	0	111	56	0	35	174				
	Died..... 1st half	31	0	0	0	11	0	0	0	4	0	0	0	0	0	0	7	1	0	0	1	0	0	2	0	0	5				
	2d "	44	0	0	0	30	0	0	1	4	0	0	0	0	0	0	1	1	0	0	0	0	1	3	0	0	3				
1838	Admitted.... 1st half	870	1	2	0	2	18	64	24	32	0	15	146	7	1	0	26	1	0	13	57	0	141	95	0	33	173	884	230 ·901	1·435	3·315
	2d "	871	0	0	0	3	12	143	59	0	14	97	6	1	0	19	1	0	20	44	0	158	32	0	42	208					
	Died..... 1st half	14	1	0	0	1	0	1	3	0	0	0	0	0	1	0	2	0	0	0	2	0	1	0	0	0	2				
	2d "	11	0	0	0	2	0	1	3	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	2				

ROYAL ASIATIC SOCIETY LIBRARY OF THE BOMBAY BRANCH

EUROPEANS, PRESIDENCY DIVISION.

Abstract of the preceding Returns, shewing the Total number of Admissions and Deaths, &c. from 1829 *to* 1838.

Aggregate Strength 13,961.	Admissions and Deaths.	Diseases. Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever Ephemeral.	" continued.	" intermittent.	" remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Opthalmy.	Rheumatism.	Small Pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds and Injuries.	Other Complaints.
Admitted.... 1st half	11,797	9	6	0	128	49	171	525	635	0	199	1,216	131	157	0	857	38	0	463	661	0	1,419	414	0	690	3,807
" 2d "	14,209	10	7	0	264	39	215	936	1,543	0	307	1,355	107	103	0	850	37	0	592	705	0	1,564	421	0	818	4,851
Total....	26,057	19	13	0	392	88	386	1,461	2,178	0	506	2,571	238	260	0	1,707	75	0	1,055	1,366	0	2,983	837	0	1,508	8,158
Died..... 1st half	243	9	2	0	32	0	3	5	38	0	0	6	1	3	0	45	3	0	0	1	0	2	21	0	3	36
" 2d "	357	5	1	0	104	0	1	14	87	0	2	11	3	3	0	43	1	0	1	3	0	5	22	0	6	45
Total....	600	14	3	0	136	0	4	19	1,253	0	2	17	10	6	0	89	4	0	1	10	0	7	43	0	9	101
Average annual percentage of sick to strength.....	186·374	0·135	0·050	0	2·803	0·629	2·775	10·449	17·294	0	3·619	18·389	1·701	1·859	0	12·209	0·538	0	7·689	9·770	0	21·336	5·986	0	10·786	58·350
Do. Do. Deaths to Sick	2·302	73·684	42·857	0	34·693	0	1·036	1·300	5·169	0	0·395	0·661	4·201	2·307	0	5·213	5·333	0	0·993	0·732	0	0·234	5·137	0	0·596	1·238
Do. Do. Deaths to Strength..	4·291				10·272				0·894			0·121				0·636							0·307			0·722

PRESIDENCY DIVISION.

No. 5.—Table exhibiting the number of Admissions and Deaths from each Class of Disease for 5 years.

EUROPEAN TROOPS.

CLASSES.	DISEASES.	From 1834 to 1838. Aggregate strength 4,514. 1st Half. Adm.	1st Half. Died	2d Half. Adm.	2d Half. Died	Admissions and Deaths from each class of Disease. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Total admissions from each Class.	Total deaths from each Class.	Average annual percentage of sick to strength.	Average percentage of deaths to sick.
Fevers	Febris ephemera	80	0	61	1								
	" intermit. quot.	38	0	25	0								
	" " tertian	6	0	4	1	863	3	699	3	1,462	6	32 ·388	0 ·410
	" remittens	9	1	3	0								
	" continua	722	2	466	1								
Cholera		28	13	64	33	28	13	64	33	92	46	2 ·038	50 · 0
Diseases of the Abdominal viscera	Dysenteria acuta	315	13	569	24	352	17	593	39	945	56	20 ·934	5 ·925
	" chronica	37	4	24	5								
	Diarrhœa	256	3	399	6								
	Colica	131	0	98	0								
	Obstipatio	99	1	111	0								
	Hæmorrhois	45	0	61	0	563	5	714	6	1,277	11	28 ·732	0 ·848
	Enteritis	3	0	4	0								
	Peritonitis	1	1	2	0								
	Gastritis	11	0	12	0								
	Dyspepsia	34	0	36	0								
	Hepatitis acuta	209	8	206	9	256	13	284	14	540	29	12 ·845	5 · 0
	" chronica	47	7	78	5								
Diseases of the Lungs and Heart	Catarrhus	206	3	118	1								
	Asthma	0	0	4	0								
	Phthisis pulmonalis	10	3	9	0								
	Hæmoptysis	14	0	11	0								
	Pleuritis	0	0	0	0	288	10	285	10	573	20	12 ·693	3 ·490
	Pneumonia	49	1	56	5								
	Carditis	11	1	7	0								
	Palpitatio	5	0	4	0								
	Dyspnœa	2	0	6	0								
Diseases of the Brain	Apoplexia	4	4	1	1								
	Epilepsia	11	0	18	0								
	Paralysis	11	0	7	0								
	Cephalalgia	46	2	46	1								
	Phrenitis	0	0	0	0								
	Ictus solis	0	0	0	0	258	10	302	4	560	14	12 ·405	2 ·500
	Amentia	7	0	5	0								
	Mania	8	1	8	1								
	Hydrophobia	0	0	0	0								
	Delirium tremens	11	1	18	1								
	Ebrietas	159	2	109	0								
Diseases of the Eye	Morbi Oculorum	143	0	145	1	143	0	145	1	288	1	6 ·379	0 ·347
Do. of the Skin	" Cutis	45	0	39	0	45	0	39	0	84	0	1 ·940	0 · 0
Eruptive fevers	Variola	0	0	0	0								
	Varicella	4	1	1	0								
	Rubeola	2	0	1	0	14	1	16	0	30	1	0 ·664	3 ·333
	Scarlatina	0	0	0	0								
	Erysipelas	8	0	14	0								
Dropsies	Anasarca	14	4	20	3	19	4	23	4	42	8	0 ·930	19 ·047
	Ascites	5	0	3	1								
	Hydrothorax	0	0	0	0								
Rheumatic affections	Rheumatismus acutus	217	0	251	1	353	2	373	2	726	5	16 ·127	0 ·689
	" chronicus	129	2	110	1								
	Neuralgia	0	0	0	0								
	Odontalgia	7	0	12	0								
Venereal affections	Syphilis primitiva	415	1	420	1	842	1	837	3	1,677	4	37 ·151	0 ·238
	" consecutiva	27	0	22	1								
	Gonorrhœa	314	0	309	0								
	Hernia Humoralis	71	0	71	0								
	Stricture urethræ	13	0	9	1								
Specific diseases	Atrophia	6	2	1	1								
	Beriberi	0	0	0	0								
	Elephantiasis	0	0	0	0								
	Lepra	0	0	0	0	20	3	12	1	32	4	0 ·641	10 ·526
	Dracunculus	0	0	0	0								
	Ulcus Phagedenicum	0	0	0	0								
	Scrophula	8	1	2	0								
	Scorbutus	12	0	9	0								
Punishment	Punitus	10	0	8	0	10	0	8	0	18	0	0 ·359	0 · 0
Wounds and Injuries	Fractura	10	1	12	0								
	Luxatio	0	0	2	0								
	Subluxatio	14	0	18	0								
	Vulnus Sclopiterum	2	0	1	0	223	3	203	2	426	5	9 ·431	1 ·173
	" Incisum	30	0	47	0								
	Contusio	136	2	116	2								
	Ambustio	24	0	7	0								
Other diseases including, Phlegmon, Ulcers, &c.		509	3	547	8	509	3	547	8	*1,147	† 11	25 ·209	0 ·663
	Total	4,912	91	5,046	130	4,942	91	5,046	130	9,988	221	221	2 ·213

Average per centage of deaths to strength during these five years has been 4 ·430.

* Of this number were Phlegmon ... 402 0
Do. &c. Ulcers ... 241 1
Do. &c. Wounds Simple &c. 106 0

† 1 Casualty from Aneurisma, 3 from Splenitis, 1 Fistula in perinæo, 1 Aponeurosis lumborum, 1 Cystitis and 2 Cynanche.

Diseases of Children.

It has been observed, that children within the first year after their arrival in this country, whether from England, New South Wales, or the Cape of "Good Hope," but especially from the latter place, become emaciated, suffer from disordered bowels, and fall into a state of marasmus by which many are cut off. The mesenteric glands on dissection are invariably found hypertrophied and the intestines contracted; the liver also, is in some cases enlarged.

Tonics, quinine with nourishing food and wine are the most useful remedies in the treatment of this disease, and in some cases the tincture of iodine has had a good effect.

Remarkable case of convulsions.

The following interesting case of convulsions which occurred in a boy aged 7 years, is from the rapidity of its progress worthy of being recorded; he was admitted March 4th with slight diarrhœa, for which he had a dose of castor oil, and next day his bowels were in a perfectly natural state; on the morning of the 6th, between 6 and 7 o'clock, he was observed to have some degree of stupor, and shortly afterwards was affected with convulsive movements of the muscles of the limbs, neck and face, the pupils became dilated, and the countenance assumed a livid hue round the mouth and eyes; the whole body was violently agitated with convulsions especially the left side; in a short time the right side became entirely paralytic and motionless, but the convulsions continued to affect the other side every 8, or 10 minutes, until death, which took place a little before 9 o'clock. A.M. Cold water was sprinkled over the face, and some stimulants were at first administered; a vein in the arm, and the temporal arteries were opened at 7 o'clock, but even then he had scarcely any pulse, and appeared to be sinking fast, and very little blood was obtained; a blister to the nape of the neck, and sinapisms to the feet were applied, without any effect. On dissection, the vessels on the surface of the brain were found to be very turgid, and the right ventricle greatly distended with bloody serum; the left ventricle was in a natural state, and the

other parts of the brain appeared healthy. The table will shew the generally fatal nature of these diseases.

European children are likewise subject to a discharge from the vagina, on attaining their 7th or 8th year; the fluid is commonly of a muco-purulent appearance, and at times is in such quantity, as to affect the general health, inducing weakness, wasting, and loss of appetite; sometimes pain is felt about the uterine region, with uneasiness and scalding in voiding the urine.

Treatment. Strict attention to cleanliness, with local astringents, tonics, particularly chalybeates, and the frequent use of the cold affusion have proved effectual in removing this complaint.

Native troops stationed at Madras.

The Troops forming the Native part of the Force, are usually three Regiments of infantry, which are hutted, one at Vepery, a second at Perambore, and the third, a veteran battalion, is located in Blacktown.

Vepery Lines.

The lines in Vepery are situated immediately to the south of the principal street of the village, on a space of ground 370 yards in length, by 200 in breadth, which is insufficient for the entire regiment, and consequently two companies are placed on the opposite side of the street.

The huts which are in rows are built of mud, and roofed with palmira leaves or straw; the space allotted to each being 12 feet by 6, with an enclosure of the same dimensions; the floors are not raised from the ground, and consist of mud mixed with a little chunam; a mat laid thereon with a coarse cumbley usually forms the sepoy's bed, few having cots, or furniture of any kind.

The lines are kept as clean as circumstances permit, drains run on each side of the houses, but heretofore during the

rainy season, on account of the principal drain not being properly constructed, the channels were apt to become choked; and the neighbouring locality flooded. This evil has however been lately remedied by the drain being efficiently opened.

In the immediate vicinity of the lines there are several tanks of stagnant water; which have been allowed to get into a very offensive state, and are never used; the water of one situated near the parade ground however, is made use of by the sepoys in cooking, and for washing; adjoining is a Roman Catholic burying ground which occasionally emits offensive effluvia; these nuisances under ordinary circumstances do not seem to have any very prejudicial effect on the native constitution, though doubtless they must, in a greater or less degree, favor the action on the system of any epidemic poison; and cholera when it occurs in Madras, accordingly produces considerable havoc in and around these lines; during the rainy season fever of a remittent form is sometimes severe and fatal in this locality, and catarrhs and rheumatism are also rather frequent; but in the hot season it has generally been healthy.

Hospital. The Hospital is situated at the north end of the lines, close upon the main street; it is a substantial building raised two feet from the ground, built of brick and tiled, having a verandah on each side, with four small rooms taken off the ends; it consists of one long ward 120 feet by 16, and is capable of containing 60 patients; the rooms off the verandahs serve for a surgery, dispensary, bath room and dead room. There is a palisade round the building at a distance of 40 feet, and at the two angles on the north side are a cook-room and privy.

Perambore Lines. Perambore, where another native regiment is cantoned, is situated three miles north-west of the Fort, and one mile north of the Vepery barracks. The district under this name comprehends several villages.

The huts of the men are disposed in the same way as at Vepery, in streets, and constructed of similar materials.

The site of the lines is only five feet above the level of the sea, and the ground being uneven, much water lodges in the neighbourhood in the rainy season; some parts are waste, but a considerable portion is under rice cultivation; the waste parts are very offensive, from being places of common resort for the natives.

The soil though sandy on the surface, is clayey at some depth, and numerous brick-kilns and potteries, surround the lines in every direction, the smoke from which at times renders the atmosphere very disagreeable.

Burying and burning grounds for the dead, are also numerous round these lines, the latter as usual being very offensive.

The water here, as elsewhere in Madras, is for the most part brackish, containing salts of soda, magnesia and lime, in combination with muriatic and sulphuric acids, as in sea water, though in comparatively small proportions; good water is however found in a tank, and in a well in the mess compound.

Hospital. The hospital is situated close to one end of the lines, it is built of brick and tiled, and raised two feet from the ground; it consists of one ward 61 feet, by 15½, and cannot accommodate with comfort more than 30 sick; a verandah surrounds the building, and at the distance of 8, or 10 yards, a paling (within which also are the offices) encloses the whole. The accommodation is found to be occasionally insufficient for the sick of the regiment.

From what has now been stated, it will appear that these lines are ineligibly situated, and the distance from the Fort where the men are required to be on duty every second week, is another objection to their position.

The exciting and predisposing causes of acute disease, exist here in a greater degree than in the Vepery lines, and the amount of acute disease in the one, compared with the other, is proportionably greater also, and at this part of the town, as in Vepery, cholera always commits great ravages.

Lines of the Veteran Battalion. The lines of the Native Veteran Battalion are situated about a mile and a half north of the Fort, close to, and within the north wall of Black-town, in the immediate vicinity of the seven wells; the situation though low, is healthy. The place of arms and hospital are also within the walls, close to the lines.

Hospital. The hospital is built of brick and tiled, with a pent roof, it consists of one long ward capable of containing 40 sick, a range of pillars in the centre supports the roof, which extends so as to form verandahs in front and rear, it also projects at the southern extremity where there are two small rooms, one for a dispensary, the other for the assistant apothecary; it is well ventilated by doors and windows, but the latter are unprovided with venetians or blinds.

Although the men of this corps suffer chiefly from chronic complaints, the mortality amongst them is generally considerable. The following table shews the nature and amount of disease, with the mortality which has occurred from 1834, to 1838 inclusive, in the 1st Native Veteran Battalion.

Diseases.	Adm.	Deaths	Average annual strength 1360.
Fevers	119	* 17	Intermitt. 10 *
Cholera	6	2	
Diarrhœa	24	6	
Chest complaints	39	† 9	Asthma 4 †
Rheumatism	58	1	
Other diseases	412	35	
Total	656	70	

Body Guard lines. The Governor's Body Guard which consists of two troops of cavalry, may also be considered as forming part of the Garrison; the Body Guard lines are situated on the west part of the *Island* close to Government bridge, adjoining the Camp Equipage depôt, and are separated from the village of Chintadrapettah by the river Cooum. The men are allowed to live in any of the surrounding villages, no hutting ground being allotted for them.

Barracks and Hospital. The barracks and hospital, are in the neighbourhood of the horse lines; the hospital is a small building forming the end of a range of store-rooms, but large enough for the sick of this body of men, who are generally robust, muscular and remarkably healthy, being almost exclusively Mahomedans of respectable families. Except fever acute disease is rare amongst them, and it is generally of an ephemeral character and easily cured; within the last two or three years cases of dracunculus have not been unfrequent, this disease has chiefly occurred in men who had been on duty to Coimbatore (a station in the *southern division,*) but as formerly mentioned, the cause of the disease has been known to exist in the immediate vicinity of their lines for several years past, and it is highly probable that it has been engendered in many of the men in whom it has occurred, in the village of Chintadrapettah.

Duty of the Native troops, The duty of the native troops, is much the same as that of the European soldier; they furnish part of the garrison, and other guards; those guards however in exposed situations, are almost exclusively mounted by the native soldier, as his constitution is comparatively but little affected by the solar heat; they have in like manner drills and parades to attend; but their duty in general has not been found to be prejudicial to health.

Diet and mode of living. Their mode of living when off duty is perfectly similar to that of the native population in general, and the majority being married, have their families with them; when off duty they resume their native loose

garments, and retain all their native habits and customs. Their food like that of other natives consists of rice, eaten either with condiments, or with curry, the use of beetle nut and tobacco is very general, and some consume the latter to such an extent as to injure their constitutions, and induce a state of marasmus often attended with indigestion, and diarrhœa; others again especially amongst the mussulmans, are addicted to the smoking of narcotic drugs, with the hookah, the abuse of which brings on a debilitated state of the system with nervous tremor, and not unfrequently temporary delirium which sometimes ends in confirmed mania; whilst in all, sooner or later, the habit is followed by emaciation, weakness, indigestion and fatal diarrhœa; but few of the sepoys comparatively are addicted to the use of ardent spirits. It should here be mentioned with regard to food, that in years of scarcity Government ensures an adequate supply of rice to the sepoy by granting a compensation, which brings it within his means to purchase, so that this portion of the native population is at all times placed, beyond the influence of want.

Smoking narcotic drugs.

Remarks on the table of diseases of native troops

A table is appended shewing the nature and amount of the most important diseases, which have occurred during ten years, from 1829, to 1838 inclusive, with the mortality from each. The aggregate strength during that time, has been 60,142, and the total admissions of sick 25,944, or 43 per cent annually on the strength, presenting a striking difference in the ratio of sickness amongst them, as compared with European troops; the amount being less than 1-4th in the natives; the proportion of deaths to the sick treated has been $2\frac{1}{2}$ per cent, nearly the same as amongst the European troops, while that of deaths to the strength has been scarcely a fourth part as high, being little more than one per cent annually. The average per centage it will appear holds pretty uniform throughout the decennial period, except in 1837, and 1838, when the mortality was nearly double; in these two years

the deaths to sick, were 5 per cent, and 2 per cent. on the strength.

The most fatal diseases have been *cholera, diarrhœa, dysentery, intermittent fever, atrophy and rheumatism;* the percentage of deaths to the admissions of these and other diseases, is exhibited in the table.

It will be observed, that although more than one half of the admissions occurred during the first semi-annual period, the numbers under the heads "cholera," "diarrhœa," "dysentery," and "fever" are much increased during the latter half of each year, owing to the prevalence at that time of the general exciting causes of acute disease, viz. cold and wet.

Cholera. The table shews that cholera has prevailed more or less every year, and that epidemic visitations of this disease happened in the years 1831, 1832, 1833, 1837 and 1838. Of the total number of cases which have occurred viz. 263, with 140 deaths, 108 cases, with 58 deaths, took place in 1833; no cause is stated for the great increase in this year, nor perhaps can any be given, for although Europeans suffered, comparatively to a small extent at that time, the general tables shew, that it has prevailed amongst them in other years, when the natives were almost exempt from it. Fully a fifth part of all the deaths amongst the native military, has been produced by cholera, and the great mortality, (53 per cent on the admissions) which has attended it, shews how inefficacious the treatment of this disease still continues to be; the stimulating plan, aided by the use of calomel and opium, has been that most generally followed.

Diarrhœa. One of the causes of diarrhœa has been alluded to in the preceding remarks, viz. the excessive use of narcotic drugs, another very frequent exciting cause of it, as well also as of dysentery, is exposure to cold and wet in the rainy season, and sleeping on damp floors with but scanty cover-

ing; these diseases are also sometimes occasioned by the use of imperfectly boiled rice, eaten cold in the morning.

The treatment of cases of diarrhœa, occasioned by the long continued abuse of narcotic drugs, and attending a weakly atrophic state of the constitution is always unsatisfactory, and but seldom followed by a thorough, or permanent restoration to health. A course of tonics with gentle alteratives, and careful attention to diet, with the stimulus of wine or spirits, is requisite; relapses are frequent, for men addicted to narcotics seldom remain longer than a month or two at duty, and are at last very generally lost to the service, by death, or by being discharged. When produced by cold, diarrhœa is more simple, and the treatment less complex; but there is a variety of the complaint, which is frequently observed to occur amongst Europeans as well as natives, during the prevalence of epidemic cholera, and also to precede and follow visitations of that disease, which requires much attention, and careful management. A few grains of calomel however, combined with laudanum or opium, and followed by an oily laxative, soon checks its progress; and it has been observed in this form of the disease, that the exhibition of five grains of calomel and five of sulphate of quinine, with one grain of opium has been attended with a happy effect; a gentle dose of rhubarb and magnesia, and the use of bitter tonics for a day or two generally restores the system to a healthy state.* Diarrhœa forms only 1-36th part of all the admissions, but it has caused nearly 1-14th of the mortality.

Dysentery. Dysentery in general is a mild disease as it occurs in the native, compared with this affection in the European, and is of more rare occurrence; the tables shew that little more than one man in two hundred amongst natives has been affected annually, while 17 per cent were

* In similar cases amongst Europeans ten grains of calomel with one of opium, has been generally given, followed in 3 or 4 hours by a laxative, and with very successful results.

attacked amongst Europeans. The mortality compared with the number treated appears to be greater amongst the natives, but the fatal cases have generally ocurred in old and worn out men, or the disease existed for a long time in a chronic form, before admission, in men of dissipated habits, as formerly alluded to. In such cases, obstinate though not extensive ulceration usually exists at the *caput cœcum coli*, and at the termination of the *ilium*, and the patient generally dies exhausted as if from inanition. In the treatment much difficulty is always experienced in regulating the diet, for although allowed that which is suited to the disease, *arrow-root*, *sago*, *wine*, &c. the sepoys invariably persist in taking rice and curry in addition, and often in injurious quantities, by which the complaint becomes aggravated. The best treatment has been found to be mild nutritious diet, counter irritation over both iliac regions, particularly the right, tonic decoctions with quinine, but especially the decoction of colomba with lime water in equal parts, with the addition of a few grains of ipecacuan; and four or five grains of blue pill, with two or three of ipecacuan and one of opium given at bed time, greatly assist the healing process by correcting the diseased secretions; the mineral acids, especially the nitric, and the sulphates of copper and iron, have also been used with good effect, but as the cure is always of slow progress, the foregoing plan of treatment will be found best suited to the disease.

In the other and more ordinary cases of dysentery, the symptoms are seldom so acute as to require venesection, and but rarely the topical abstraction of blood, when however the evacuations are frequent, slimy, bloody and viscid, and attended with heat and pain in the abdomen, and straining and tenesmus at stool, with fever, a few leeches to each lumbar region but particularly to the left, (for in this form of the disease the inflammation is almost exclusively confined to the rectum and sigmoid flexure,) readily subdue the inflammatory action; a dose of oil should then be given for the purpose of clearing out the bowels; after which a few days use of the ipecacuan, in two or three grain doses, four times

daily, conjoined with a light tonic, as infusion of gentian, restores the diseased bowel to a healthy condition; a small quantity of rhubarb may be added to the mixture, on the second or third day with advantage.

Dysentery constitutes only 1-62d part of the admissions, but the deaths from it amount to 1-18th of the whole mortality.

Hepatitis. The almost total absence of hepatic disease amongst natives, has been observed in a former place, and this will not fail to be remarked in these general tables; there being only 49 cases of hepatitis in 25,944 admissions.

Fever. Fever in its various types forms a large proportion of the admissions, not less than 1-4th part, and it has produced nearly 1-7th of all the mortality; the most prevalent forms have been the ephemeral, and the quotidian intermittent. The small mortality attending the first sufficiently shews its mild nature, being only one death in every 243 attacks, in the second the mortality has been 2¼ per cent on the number treated. The large amount of cases of the latter type, (1809,) which have occurred, requires some notice, as it has been stated in the observations on the sick of the European part of the force, that intermittent fevers do not prevail to any extensive or virulent degree, in or around Madras.

The native Regiments at the Presidency are usually relieved in from one to two years, and many of them come from parts of the country where both intermittent and remittent fevers, of a bad type, are endemic, especially the Ceded Districts, Mysore, and the Tenasserim Coast; and, as the medical returns of regiments, are furnished to the division in which the corps may happen to be on the last day of the half year to which they refer, although the regiment may not have been more than a few days stationed in it, it frequently

happens not only here, but throughout the whole army, that the diseases and deaths which have occurred during the four or five first months of the half year, in one division, are included in the returns of another several hundred miles distant. To particularize a few such instances, this took place in the Presidency division, on the arrival of the 5th N. I. from the Tenasserim Coast, in 1834; of the 17th from the Ceded Districts, in 1836; and of the 19th from Mysore, in 1838; a very large majority of the cases, and fully 3-4ths of the number of deaths occurred under these circumstances, while again, as has been invariably remarked, the men of these regiments continue for a considerable time, subject to relapses on slight exposure; and in this way attacks of intermittent and remittent fevers, are occasionally seen at the Presidency. But further, detachments are not unfrequently sent to various out-stations on command, and the number of cases of fever which occur in these bodies of men is notoriously great, it not being unusual for the whole of a party to be attacked, and all these cases are included in the returns from the Head Quarters of the regiment. It has also been observed, and the fact seems to be generally acknowledged, that sickly regiments arriving from unhealthy malarious stations, soon regain their health and strength at Madras.

These observations are considered to afford a satisfactory explanation of the frequency of intermittent and remittent fevers, shown in the returns of this division. It is quite true however, that these diseases are at times of local origin, but not frequently, and they are in general mild, seldom fatal, and can very generally be removed without the aid of quinine, by a purgative, one or two doses of calomel at bed time; and the solution of neutral salts, with tartrate of antimony.

In the remittent type, after the inflammatory state of the system and the local complication, which generally affects the head, have been subdued by a few leeches, (for it is seldom so acute as to require V. S.) a smart purgative, and the use of the solution just mentioned, quinine is given to check the ten-

dency which is found to exist in this fever to lapse into the intermittent form; but, should the inflammatory symptoms resist the first treatment, as occasionally happens, there is great danger of effusion taking place in the head, and this is best averted by a repetition of the leeches, and the continuance of the calomel to affect the system, along with counter irritation to the nape of the neck.

It may be instructive, as well as interesting to shew here in a tabular form, the proportion which the admissions, from each of the more important diseases, among European and Native troops bear to the total sick, with the proportion of deaths to the whole mortality, for the purpose of contrasting the result in each of these bodies of men.

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Table shewing the number of Admissions and amount of Mortality from the most particular diseases amongst both European and Native Troops at the Presidency during the period of ten years, from 1829 to 1838 inclusive, with the proportion each bears to the total number of Admissions and Deaths: the contrast in these respects in several of the columns of disease between the European and Native sick, is very remarkable.

	Cholera.		Fever.		Dysentery.		Hepatitis.		Diarrhœa.		Thoracic diseases.		Rheumatism.		Syphilis.		Total from these diseases.	
	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.
Europeans.																		
Total Admissions.. 26,057	392	1/67	3575	1/7	2418	1/11	1707	1/13	1461	1/18	837	1/31	1366	1/19	2983	1/9	14,739	4/7
Total Deaths..... 600	136	1/4	35	1/17	125	1/5	89	1/7	19	1/31	43	1/14	10	1/60	7	1/85	464	4/5
Natives.																		
Total Admissions.. 25,944	263	1/98	6029	1/4	417	1/62	49	1/529	714	1/36	326	1/80	2483	1/10	1360	1/19	11,641	1/2
Total Deaths..... 661	143	1/5	92	1/7	36	1/18	6	1/110	46	1/14	44	1/15	32	1/21	5	1/132	404	8/13

The following Table further exhibits the annual percentage of Admissions to the strength; of Deaths to the sick treated; and the percentage of Mortality to the strength; it also exhibits the difference amongst European and Native sick in these respects.

	Cholera.		Fever.		Dysentery.		Hepatitis.		Diarrhœa.		Thoracic diseases.		Rheumatism.		Syphilis.		Total from these diseases.	
European Strength 13,981																		
Percentage of Admissions to strength.....	392	2 ·803	3575	25 ·570	2418	17 ·294	1707	12 ·209	1461	10 ·449	837	5 ·986	1366	9 ·770	2983	21 ·336	14,739	105 .421
do. of Deaths to sick treated.....	136	34 ·693	35	0 ·976	125	5 ·169	89	5 ·213	19	1 ·300	43	5 ·137	10	0 ·732	7	0 ·234	464	3 ·148
do. of Deaths to strength.	136	0 ·972	35	0 ·250	125	0 ·694	89	0 ·636	19	0 ·135	43	0 ·307	10	0 ·071	7	0 ·050	464	3 ·331
Native strength 60,142																		
Percentage of Admissions to strength.....	263	0 ·437	6029	10 ·024	417	0 ·693	49	0 ·081	714	1 ·187	326	0 ·542	2483	4 ·128	1360	2 ·261	11,641	19 ·355
do. of Deaths to sick treated.....	143	54 ·372	92	1 ·525	36	8 ·633	6	12 ·245	46	6 ·442	44	13 ·496	32	1 ·268	5	0 ·367	404	3 ·470
do. of Deaths to strength.	143	0 ·221	92	0 ·152	36	0 ·059	6	0 ·009	46	0 ·076	44	0 ·073	32	0 ·053	5	0 ·008	404	0 ·671

A second table No. 7 similar to that for Europeans, and of an equally comprehensive nature, and for the same period, viz. 5 years, has been made out for the Native part of the force; the diseases are similarly classified and the total admissions from each species and class of disease are shown, with the mortality, and the proportions of sick to strength, and of deaths to sick treated.

The most numerous admissions have been from the class of *fevers, diseases* of the *abdominal viscera, venereal affections* and *diseases of the lungs ;* the greatest mortality has been occasioned by *cholera, diseases* of the *abdomen, fever, chest affections, diseases* of the *brain, dropsies,* and *specific diseases,* in which latter is included *atrophy,* from which nearly all the mortality occurring in this class has been produced; the peculiar state of the system denoted by the term atrophy, has been explained in the observations on that disease, under the head "General Hospital," and the same remarks apply to it equally as it occurs in the Native troops.

The annual average percentage of sick to strength during these five years has been 43½, of deaths to sick 3½, and of deaths to strength 1½.

From this and the corresponding table for Europeans, the following tabular statements have been framed; the first exhibits the amount of admissions and deaths, which have occurred from the more important classes of disease, and the proportion which the attacks and deaths from each, bear to the total admissions and mortality; the difference is also shewn in these points amongst the European and native sick. The second exhibits the percentage of sick to strength, and of mortality to disease; and likewise of deaths to strength in the same classes of disease; and further points out the contrast in these respects, amongst the European and native sick.

Amount of Diseases and Deaths from the several classes of diseases during five years from 1834 *to* 1838, *with the average proportions of Admissions and Deaths.*

	Fevers.		Cholera.		Dysenteria.		Abdominal complaints.		Diseases of liver.		Diseases of lungs.		Diseases of brain.		Dropsies.		Rheumatic affections.		Venereal complaints.	
	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.	Adm. and Deaths.	Prop.
Europeans.																				
Total Admissions.. 9,986	1462	1/6	92	1/10 3/8	945	1/10	1297	1/7	560	1/17	573	1/17	549	1/18 1/2	42	1/23 7/7	728	1/13	1677	1/6
Total Deaths..... 221	6	1/73	46	1/5	56	1/4	11	1/20	29	1/7	20	1/11	14	1/16	8	1/27	5	1/44	4	1/35
Natives.																				
Total Admissions.. 8,816	2241	1/4	95	1/93	195	1/45	587	1/15	20	1/431	218	1/40	169	1/52	60	1/147	841	1/10	450	1/19
Total Deaths..... 320	45	1/7	57	1/5	20	1/31	32	1/9	4	1/73	24	1/13	16	1/19	18	1/17	14	1/21	2	1/150

Table No. 2 shewing the percentage of Admissions to strength and that of Deaths to sick and strength in the same classes of disease.

	Fevers.	Cholera.	Dysenteria.	Abdominal complaints.	Diseases of liver.	Diseases of lungs.	Diseases of brain.	Dropsies.	Rheumatic affections.	Venereal complaints.
Europeans.										
Strength..... 4,514										
Percentage of Sick to strength.....	32 ·388	2 ·038	20 ·934	28 ·732	12 ·848	12 ·693	12 ·405	0 ·930	16 ·127	37 ·151
do. of Deaths to sick.....	0 ·410	50 ·0	5 ·925	0 ·848	5 ·0	3 ·490	2 ·500	19 ·047	0 ·666	0 ·238
do. of Deaths to strength....	0 ·132	1 ·019	1 ·240	0 ·242	0 ·642	0 ·443	0 ·310	0 ·177	0 ·110	0 ·088
Natives.										
Strength..... 20,253										
Percentage of Sick to strength.....	11 ·065	0 ·469	0 ·962	2 ·898	0 ·098	1 ·076	0 ·834	0 ·296	4 ·152	2 ·221
do. of Deaths to sick	2 ·008	60 ·0	10 ·256	5 ·451	20 ·0	11 ·009	9 ·467	30 ·0	1 ·664	0 ·444
do. of Deaths to strength....	0 ·222	0 ·281	0 ·098	0 ·158	0 ·019	0 ·118	0 ·079	0 ·088	0 ·069	0 ·009

PRESIDENCY DIVISION.

No. 6—*Return of Sick of the Native Troops exhibiting the half Yearly Admissions and Deaths from the principal diseases, and those which have been either Epidemic or Endemic, during the period of ten Years—from* 1829 *to* 1838 *inclusive.*

Years.		Admissions and Deaths.	Diseases. Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever sphemeral.	" continued.	" intermittent.	" remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis.	Thoracic diseases.	Ulcer phagedenic.	Wounds and Injuries.	Other Complaints.	Average strength each year.	Average percentage of sick to strength.	Annual percentage of death to sick treated.	Annual percentage of deaths to strength.
1829	Admitted.... 1st half	1,582	1	0	0	2	0	0	36	29	0	0	20	152	17	0	3	4	0	21	241	0	109	15	0	93	837	7,996	43 ·413	1 ·795	0 ·779
	2d "	1,672	0	0	0	3	0	0	34	25	0	0	33	67	20	0	4	2	0	47	231	0	101	12	0	139	1,150				
	Died..... 1st half	21	1	0	0	2	0	0	2	0	0	0	0	2	1	0	0	0	0	0	0	0	1	1	0	1	10				
	2d "	41	0	0	0	5	0	0	3	4	0	0	1	3	1	0	0	0	0	1	0	0	0	0	0	1	22				
1830	Admitted.... 1st half	1,772	0	0	0	2	0	0	18	9	0	0	13	52	4	0	2	13	0	29	199	0	99	12	0	126	1,194	9,546	37 ·911	1 ·740	0 ·659
	2d "	1,847	0	0	0	3	0	0	12	0	306	24	41	5	0	4	8	0	44	229	0	96	22	0	145	899					
	Died..... 1st half	37	0	0	0	2	0	0	3	0	0	0	1	0	1	0	1	0	0	0	6	0	0	3	0	2	18				
	2d "	26	0	0	0	1	0	0	0	0	0	1	3	1	1	0	0	0	0	0	3	0	0	4	0	1	11				
1831	Admitted.... 1st half	1,640	0	0	0	2	0	0	30	12	0	112	15	70	9	0	1	16	0	23	161	0	96	11	0	113	897	7,658	44 ·006	1 ·699	0 ·635
	2d "	1,730	1	0	0	15	0	0	35	32	0	352	8	119	30	0	3	6	0	62	142	0	94	10	0	93	724				
	Died..... 1st half	30	0	0	0	1	0	0	1	2	0	3	1	3	0	0	0	1	0	0	2	0	1	1	0	1	13				
	2d "	34	1	0	0	2	0	0	2	3	0	0	2	2	1	0	1	0	0	0	3	0	0	3	0	0	14				
1832	Admitted.... 1st half	1,387	0	0	0	3	0	0	18	27	0	223	21	51	38	0	1	4	0	12	86	0	62	4	0	98	739	7,025	43 ·174	1 ·912	0 ·825
	2d "	1,645	1	0	0	26	0	0	75	39	0	601	23	78	100	0	0	0	0	50	68	0	56	8	0	78	441				
	Died..... 1st half	24	0	0	0	2	0	0	1	0	0	0	1	1	0	0	0	0	0	1	1	0	0	1	0	2	14				
	2d "	34	1	0	0	10	0	0	3	2	0	1	0	4	0	0	0	0	0	1	1	0	0	3	0	1	7				
1833	Admitted.... 1st half	1,980	0	0	0	67	0	0	52	9	0	464	15	115	10	0	11	4	0	41	188	0	66	6	0	80	812	7,704	47 ·403	3 ·066	1 ·453
	2d "	1,672	1	0	0	41	0	0	60	38	0	473	14	73	12	0	2	4	0	105	119	0	107	9	0	79	524				
	Died..... 1st half	55	0	0	0	36	0	0	2	1	0	2	1	3	1	0	0	0	0	0	0	0	1	1	0	1	6				
	2d "	57	1	0	0	22	0	0	4	4	0	1	2	1	1	0	0	0	0	0	2	0	0	3	0	1	14				
1834	Admitted.... 1st half	1,398	0	40	1	10	182	2	37	21	0	144	2	175	17	2	6	2	0	36	136	4	93	28	3	109	357	4,863	47 ·396	2 ·819	1 ·336
	2d "	997	0	10	0	1	87	0	25	12	0	85	3	183	3	1	2	2	0	23	104	1	35	35	1	86	205				
	Died..... 1st half	46	0	7	0	6	0	0	3	3	0	0	2	3	1	0	3	0	0	1	1	0	0	2	0	3	7				
	2d "	19	0	6	0	0	2	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3				
1835	Admitted.... 1st half	840	1	6	0	0	132	0	19	9	0	39	2	121	4	5	1	4	0	17	89	0	52	16	0	83	250	3,918	41 ·909	2 ·070	0 ·867
	2d "	802	0	11	1	0	60	0	36	19	0	99	23	128	4	1	5	5	0	16	79	0	36	13	0	62	197				
	Died..... 1st half	16	1	3	0	0	0	0	0	0	0	1	0	2	0	0	1	0	0	1	1	0	0	2	0	0	4				
	2d "	18	0	3	0	0	0	0	2	3	0	0	1	2	0	0	0	1	0	0	2	0	0	2	0	0	2				
1836	Admitted.... 1st half	904	2	5	0	0	200	1	28	11	0	92	15	71	4	22	3	11	0	12	85	1	39	31	0	49	224	3,755	48 ·921	2 ·286	1 ·116
	2d "	933	0	3	0	0	75	2	34	34	0	159	4	144	8	8	1	5	0	60	64	0	43	23	0	73	193				
	Died..... 1st half	24	2	0	0	0	1	0	1	0	0	2	3	2	0	0	0	0	0	0	2	0	1	6	0	0	4				
	2d "	18	0	1	0	0	3	0	4	0	0	0	0	5	1	0	0	0	0	0	0	0	0	2	0	1	4				
1837	Admitted.... 1st half	734	1	22	2	2	123	1	25	25	0	58	11	60	5	51	0	4	0	14	65	0	31	13	0	62	179	3,930	41 ·424	4 ·832	2 ·010
	2d "	874	1	11	0	48	69	0	45	20	0	113	3	90	9	6	0	11	0	39	76	0	49	18	0	75	191				
	Died..... 1st half	28	1	0	1	1	1	0	6	5	0	0	1	4	2	0	0	0	0	0	1	0	0	1	0	1	3				
	2d "	51	1	5	0	29	0	0	0	4	0	0	0	1	2	0	0	3	0	0	0	0	0	1	0	0	5				
1838	Admitted.... 1st half	760	0	15	0	2	57	0	41	10	1	130	4	54	3	25	0	7	0	21	86	2	43	18	0	63	175	3,787	37 ·074	5 ·640	2 ·165
	2d "	614	0	8	0	32	22	0	31	24	0	116	5	46	4	2	0	5	0	28	44	0	27	22	0	48	148				
	Died..... 1st half	26	0	2	0	0	0	0	1	0	0	1	1	4	0	0	0	1	0	1	2	1	1	1	0	0	10				
	2d "	56	0	3	0	21	0	0	4	3	0	1	0	4	0	0	0	1	0	2	5	0	0	4	0	0	11				

NATIVES, PRESIDENCY DIVISION.

Abstract of the preceding Returns, shewing the Total number of Admissions and Deaths, &c. from 1829 *to* 1838.

Aggregate Strength 60,142.		Admissions and Deaths.	Diseases. Apoplexy.	Asthma.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	" continued.	" intermit.	" remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis.	Thoracic diseases.	Ulcer phagedenic.	Wounds and Injuries.	Other complaints.
1829 to 1838. Admitted.....	1st half	13,047		43	1	99	724	4	306	162	1	1,343	118	921	111	105	28	69	0	226	1,335	7	712	154	3	567	3,364
	2d "	12,897		45	1	373	813	2	408	255	0	2,306	147	969	105	18	21	48	0	474	1,147	1	648	172	1	876	4,973
Total....		25,944		88	2	472	1,537	6	714	417	1	3,649	265	1,890	306	123	49	117	0	700	2,483	8	1,360	326	4	1,443	8,337
Died....	1st half	307		134	4	263	2	0	22	13	0	9	11	24	6	0	5	2	0	4	16	1	0	19	0	11	139
	2d "	354		12	1	50	2	0	24	23	0	6	9	20	7	0	1	6	0	4	16	0	0	25	0	6	97
Total....		661		30	1	140	4	0	46	36	0	15	20	44	13	0	6	8	0	8	32	1	5	44	0	17	236
Average annual percentage of the sick on the strength for 10 years...		43·137	0·014	0·217	0·006	0·437	1·724	0·009	1·187	0·693	0·001	6·067	0·440	3·142	0·508	0·204	0·081	0·194	0	1·163	4·128	0·013	2·261	0·542	0·006	2·901	17·196
Average percentage of deaths to the sick treated.....		2·547	100·0	32·200	25·0	53·231	0·385	0·0	6·442	8·633	0·0	0·411	7·547	2·328	1·248	0·0	12·244	6·837	0	1·142	1·288	12·500	0·397	13·496	0·0	0·974	1·700
Do.* of deaths to strength.....		1·099		0·049		0·232			0·076	0·059			0·152				0·039				0·053			0·073			0·000

* Only for principal diseases.

Including all the deaths under fever.

PRESIDENCY DIVISION.

No. 7.—Table exhibiting the number of Admissions and Deaths from each Class of Disease for 5 years.

NATIVE TROOPS.

CLASSES.	DISEASES.	From 1834 to 1838. Aggregate strength 20,263. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Admissions and Deaths from each class of Disease. 1st Half. Adm.	1st Half. Died.	2d Half. Adm.	2d Half. Died.	Total admissions from each Class.	Total deaths from each Class.	Average annual percentage of each to strength.	Average percentage of Deaths to each.
Fevers	Febris ephemera	434	4	568	3								
	" intermit. quot.	461	15	552	7								
	" " certian	24	0	45	2	1006	29	1235	16	2,241	45	11 ·066	2 ·008
	" remittens	53	3	70	2								
	" continens	34	7	45	1								
	Cholera	14	5	93	30	34	7	81	30	93	37	0 ·182	39 · 0
Diseases of the Abdominal viscera	Dysenteria acutal	59	7	77	6	76	19	119	10	196	29	0 ·202	10 ·204
	" chronica	17	2	31	4								
	Diarrhœa	150	12	171	12								
	Colica	16	0	29	0								
	Obstipatio	40	1	42	0								
	Hœmorrhois	18	0	11	1	276	16	311	16	587	32	2 ·898	5 ·451
	Enteritis	2	0	2	0								
	Peritonitis	0	0	1	0								
	Gastritis	0	0	1	0								
	Dyspepsia	35	2	51	0								
	Hepatitis acuta	6	1	2	0	17	4	8	0	25	4	0 ·098	20 · 0
	" chronica	6	3	6	0								
Diseases of the Lungs and Heart.	Catarrhus	35	2	34	3								
	Asthma	16	3	18	3								
	Phthisis pulmonalis	18	4	6	1								
	Hæmoptysis	0	0	0	0								
	Pleuritis	0	0	0	0	108	12	110	12	218	24	1 ·076	11 ·009
	Pneumonia	38	2	22	2								
	Carditis	0	0	0	0								
	Palpitatio	0	0	0	0								
	Dyspnœa	1	0	5	0								
Diseases of the Brain	Apoplexia	0	0	1	1								
	Epilepsia	2	0	1	1								
	Paralysis	19	2	17	1								
	Cephalalgia	39	1	20	1								
	Phrenitis	0	0	0	0								
	Tetanus solis	0	0	0	0	94	1	73	0	167	1	0 ·034	0 ·467
	Amentia	12	1	8	0								
	Mania	16	0	13	0								
	Hydrophobia	0	0	0	0								
	Delirium tremens	5	0	2	0								
	Ebrietas	0	0	0	0								
Diseases of the Eye	Morbi Oculorum	100	3	146	2	100	3	146	2	246	5	1 ·313	1 ·977
Do. of the Skin	" Cutis	726	2	313	2	726	2	313	2	1,039	4	5 ·130	0 ·385
Eruptive fevers	Variola	7	1	1	0								
	Varicella	31	0	6	0								
	Rubeola	0	0	0	0	51	1	1	0	62	1	0 ·296	1 ·666
	Scarlatina	1	0	0	0								
	Erysipelas	4	0	2	0								
Dropsies	Anasarca	24	11	31	5								
	Ascites	0	2	2	0	40	13	29	5	69	18	0 ·296	20 · 0
	Hydrothorax	0	0	0	0								
Rheumatic affections	Rheumatismus acutus	200	2	154	4								
	" chronicus	263	2	209	3	469	7	374	7	843	14	4 ·152	1 ·654
	Neuralgia	0	0	2	0								
	Odontalgia	6	0	9	0								
Venereal affections	Syphilis primitiva	172	1	207	0								
	" consecutiva	29	1	15	0								
	Gonorrhœa	65	0	49	0	256	2	197	0	420	2	2 ·221	0 ·441
	Hernia Humoralis	49	0	26	0								
	Stricturæ urethræ	1	0	4	0								
Specific diseases	Atrophia	89	13	43	11								
	Scorbut	3	1	5	0								
	Elephantiasis	1	0	0	0								
	Lepra	0	0	0	0								
	Dracunculus	109	0	15	0	214	13	73	11	287	24	1 ·417	10 ·104
	Ulcus Phagedenicum	3	0	1	0								
	Scrophula	11	1	6	0								
	Scorbutus	3	0	4	0								
Punishment	Pœna	21	0	2	0	21	0	2	0	23	0	0 ·113	0 · 0
Wounds and Injuries	Fractura	10	1	8	1								
	Luxatio	5	0	8	0								
	Solibtudo	54	0	55	0								
	Vulnus Sclopetorum	8	1	17	0	256	4	343	2	701	6	3 ·461	0 ·856
	" Incisum	83	1	78	0								
	Contusio	156	1	170	1								
	Ambustio	25	0	33	0								
Other diseases	Including, Phlegmon, Ulcus, &c.	669	10	691	15	669	10	691	15	*1,546	125	7 ·732	1 ·469
	Total	4,086	149	4,134	169	4,086	149	4,134	169	5,810	302	43 ·528	3 ·422

Average annual percentage of death to strength during these five years 1· 491.

* Of this number were Phlegmon..... 150 4
Do. Ulcus..... 209 3
Do. Ruba Simplex..... 127 2
TOTAL... 1367 11

The remaining 12 fatal cases were under the heads Phrenitis in persons, Hydrophobia, Hæmorrhois, Splenitis, Tetanus, Scirrhus, Aneurism.

CONCLUDING REMARKS.

General remarks on the health of the European residents of Madras.

As respects the health of the European portion of the community in general, not included in the returns of the sick of the Presidency, which are annexed, it may be observed, that notwithstanding the existence of luxuriant, and in many situations uncontrolled vegetation; stagnant and offensive tanks, and lodgements of water; imperfect drainage and its consequences; and the influence of a vertical sun, Madras is perhaps, as healthy a city as can be found within the tropics, or even in some of the more temperate climes, and however inexplicable the immunity from epidemic diseases, which it usually enjoys, may be under these circumstances, such is however known to be the fact; for with the exception of cholera, which occasionally makes its appearance here, as well as in most other large towns throughout India, and of which it may be said "Equo pulsat pede, pauperum tabernas, regumque turres," scarce any other epidemic is met with amongst Europeans; the fevers and dysenteric complaints so general throughout most other parts of the country, being of rare occurrence.

The continued influence of the climate however acting on European constitutions sooner or later (with the exception of some few persons who may be said to have become as it were naturalized by a long residence in India) induces chronic derangement of the hepatic system usually characterized by some of the various forms of dyspepsia, and a torpid state of the bowels, requiring the frequent, and often daily use of aperients, or enemata; and ultimately a change to a more temperate climate for its removal.

European females being but little in the open air, and seldom if ever exposed to the direct influence of the sun, soon lose the bloom of health (or European complexion), but notwithstanding the etiolated appearance which the countenance assumes, they may be said to enjoy a fair share of

health; many indeed having much better health than when in their native country; those of weakly constitutions however, are often great sufferers from the enervating influence of the climate; and to its relaxing effects on the system is doubtless to be ascribed the comparatively trifling degree of bodily suffering, which attends child birth, which here, as in southern Europe, is seldom protracted, or difficult.

APPENDIX.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN JULY, 1840.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	29·95	29·90	29·90	84½	89½	88½	——	Calm.	Sy.	Cloudy
2	—·95	—·92	—·90	82½	90	87½	——	„	„	do.
3	—·98	—·94	—·94	85	88½	88	——	„	S. Ey.	do. night clear,
4	—·98	—·96	—·94	86	88	87½	——	Sy.	„	do. do. light shower, A. M.
5	—·97	—·96	——	85	88	——	——	Calm.	„	do. do. do. P. M.
6	—·94	—·91	—·90	83½	86	85	0·1	„	S. Wy.	do. showers, A. and P. M.
7	—·89	—·92	—·87	82	85	85	0·3	Wy.	„	do.
8	—·90	—·92	—·87	82	85	85	——	„	„	do. drops of rain.
9	—·93	—·94	—·93	82½	89	87	——	N. Wy.	N. Wy.	do. hazy do.
10	—·96	—·95	——	83	89	——	——	„	„	do. high wind do.
11	—·95	—·89	—·89	82½	89	88	——	„	Wy.	do. do. do.
12	—·86	—·80	—·79	82	90	90	——	Wy.	„	do. do. squalls 9 P. M.
13	—·89	—·85	—·85	85	93	92	——	„	S. Wy.	do. drops of rain,
14	—·93	—·93	—·91	85	93	88½	——	Sy.	Sy.	do. shower, P. M.
15	—·97	—·91	—·87	84	94	88	0·2½	„	„	do. heavy rain in night with lightning and thunder.
16	—·92	—·87	—·86	83	90	87	1·15	Calm.	„	do. shower, P. M.
17	—·91	—·89	—·85	82	90	88½	0·2	„	„	do.
18	—·91	—·87	—·80	82	91	91	——	Wy.	S. Wy.	do. shower, P. M. with lightning and thunder.
19	—·88	—·85	——	83	89	——	0·11	„	„	do. do. A. M.
20	—·85	—·83	—·83	80	87	82	0· ¼	„	„	do. heavy rain 3 P. M. with lightning and thunder.
21	—·88	—·85	—·81	79	86	84	1·19½	„	„	do.
22	—·92	—·87	—·85	78	87	87	——	Calm.	„	do.
23	—·91	—·90	——	81	90	——	——	Wy.	„	do.
24	—·91	—·87	—·82	81	91	90	——	„	„	do. shower, P. M.
25	—·90	—·90	——	82	90	——	0·1	„	„	do. high wind
26	—·90	—·93	——	82	92	——	——	„	„	do.
27	—·97	—·95	—·92	83	91	91	——	Calm.	„	do.
28	—·96	—·92	—·89	84	92½	88	——	Wy.	Sy.	do. night clear.
29	—·92	—·90	—·87	83	92	87	——	Calm.	„	do. drops of rain.
30	—·92	—·91	—·86	84	92	87½	——	Sy.	S. Wy.	do. do.
31	—·92	—·92	——	82	92	——	——	„	„	do.

	In. 20ths.
Amount of rain	4 15½
Number of days on which rain has fallen during the month	17
Prevailing winds. A. M.	Wy.
Prevailing winds. P. M.	S. Wy.

Thermometer.	
Mean maximum	89
Mean minimum	82
General mean	86
Mean daily range	6

Barometer.	
Mean maximum	29·92
Mean minimum	29·87
General mean	29·90

N. B.—20 feet from level of the ground.

The above observations were kept at the Superintending Surgeon's Office.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	P. M.	WEATHER.
1	29·97	29·95	29·88	85	91	86		Wly. S.	S. W.	Clear the early part of the day; sea breeze from 5½ till 7½ P.M. heavy clouds, rain, thunder and lightning in the evening.
2	—·95	—·94	—·85	83½	88¼	86½	0·15	Wly. S.	S. W.	Partial clouds, sea breeze from 4 to 7 P. M. heavy clouds, rain, thunder & lightning.
3	—·92½	—·93	—·87½	84	88	87	0·2	W.	S. W.	Cloudy, sea breeze from 5 to 7 P. M. heavy clouds, squalls and rain.
4	—·92½	—·92½	—·84	83	86	85½	0·1	W.	S. W.	Haze, sea breeze set in 4 P. M.
5	—·99	—·88	—·85	83½	91	88		W.	S. W.	do. do. do. 5 P. M. a few drops of rain at 4 P. M.
6	—·92½	—·89	—·85	84	91	90½		W.	S. W.	do. do. do. 5 P. M. rain at 5 P. M. and lightning [rain at 7 P. M.
7	—·90	—·86	—·82½	85½	91½	91	0·2	W.	S. W.	Cloudy with rain A. M. sea breeze set in at 9 P. M. heavy clouds and squalls with
8	—·90	—·90	—·80	86	91	89	0·1½	W.	S. W.	Cloudy, sea breeze set in at 5½ P. M.
9	—·89	—·97	—·80	84½	92	87		W.	S. W.	Haze do. 2 P. M.
10	—·82	—·97	—·82	84½	89	87		S.	S. E.	Clear do. 1 P. M.
11	—·94	—·97	—·90	86	91	87		S.	S. E.	Haze do. 1 P. M.
12	—·92	—·97	—·92	86	87	86		S.	E.	Clear do. 11 A. M.
13	—·97	—·96	—·90	84	87	86½		S.	E.	do. do. 11½ A. M.
14	—·98	—·93	—·90	84	91	86		S.	E.	do. do. 12 A. M.
15	—·93	—·96	—·90	86	90	87		S.	E.	do. sea breeze 12 A. M. heavy black clouds and lightning in the evening.
16	—·97	—·96	—·95	85	85	86½	0·1½	S.	E.	Haze, sea breeze 12 A. M. rain 4 A. M.
17	30·—	—·94	—·88	85	87	86½		S.	E.	do. do. 2 P. M.
18	29·98	—·87½	—·85	85	85	86		S.	S. W.	Heavy clouds and lightning A. M. sea breeze set in at 3 P. M.
19	—·94	—·94½	—·90	84	84½	86		S. W.	E.	Haze, sea breeze set in at 2 P. M.
20	—·98	—·92	—·90	83	90½	86		S. W.	E.	do. do. 11 A. M.
21	—·95	—·94	—·88	85	86	86		S.	E.	Clear do. 1 P. M. [rain in the evening.
22	—·96	—·94	—·90	84½	85	82½		S. W.	S. E.	do. sea breeze 12½ A. M. heavy black clouds and lightning with a few drops of
23	30·—	—·96	—·90	82	87	86		S. W.	S. E.	Cloudy, a few drops of rain, sea breeze at 12 A. M.
24	29·97½	—·96	—·89	83	86	86		S. W.	E.	Haze, A. M. sea breeze 12 A. M. black clouds, heavy rain and lightning.
25	30·	—·95	—·90	82	90	85½	0·7½	S. W.	S. E.	Cloudy sea breeze set in 1 P. M.
26	29·97	—·95	—·86	84	86	86		S.	E.	do. do. 2 P. M.
27	29·93	—·91	—·83	83	86	85½		S.	S. E.	Clear A. M. do. 2 P. M. heavy clouds and lightning in the evening. [10 A. M.
28	30·—	—·93	—·89	83	87	85	2·11	S. W	S. E.	Strong wind, lightning and thunder with heavy rain from 3½ to 8½ A.M. sea beeze
29	29·99	—·94	—·87	82	86	82	2·10	S. W.	S. E.	do. do. lightning and thunder with heavy rain at 2 A. M. sea breeze 10½ A. M.
30	—·90	—·90	—·85	84	85	85		S. W.	S. E.	Haze, heavy dew, sea breeze 9 A. M.
31	—·88	—·90	—·86	82½	85	85		S. W.	S. E.	do. do. do. 9½ A. M.

Barometer.
Mean maximum.....29·94
Mean minimum.....29·87
General mean.....29·91
Height from ground floor of Dispensary 2 feet 7¾ inches.

Thermometer.
Mean maximum.....87°
Mean minimum.....81°
General mean.....86°
Mean daily range.....4°

In. 20ths
Amount of rain.....6 11½
Number of days on which rain has fallen during the month.....13
Prevailing winds.. (A.M. S. S.W. W. P. M. E. S.E. SW

The above observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN SEPTEMBER, 1840.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	P. M.	WEATHER.
1	29·91	29·85	29·85	81½	85	85	1·2	S. W.	S.	Haze, A. M. heavy rain and lightning during last night, calm P. M.
2	—·86	—·90	—·85	82	85	85	0·11	W.	S.	Cloudy A. M. heavy rain and lightning during last night, calm P. M.
3	—·88	—·90	—·86	82½	83	84	0·1	W.	S.	Cloudy A. M. light rain and lightning during last night. sea breeze set in at 7¼ P. M.
4	—·95	—·95	—·88	82	84½	85	,,	W.	S.	Cloudy and drizzly A. M. sea breeze set in at 7 P. M.
5	30·—	—·98	—·92	81½	86	86½	0·1	W.	S.	Cloudy A. M. light rain during last night, sea breeze set in at 7½ P. M.
6		—·98	—·94	82	87	87	0·5½	S. W.	E.	Cloudy A. M. rain from 7 to 8 P. M. sea breeze set in at 3 P. M.
7	29·96	—·96	—·94	83	88	87	0·4½	S. W.	E.	Haze A. M. sea breeze set in at 4½ P. M.
8	—·98	—·96	—·88	83	88½	87	,,	W.	E.	Clear A. M. drizzly 4 P. M. sea breeze set in at 4 P. M.
9	—·97	—·95	—·88	83½	85	85½	,,	W.	S.	Cloudy A. M. drizzly 6 A. M. calm P. M.
10	—·95	—·94	—·87	83	84	84	,,	W.	S.	do. light rain A. M. do.
11	—·95	—·90	—·87	81	85	83	0·2½	W.	S.	do. do. do. do.
12	—·96	—·90	—·85	82½	88	85	,,	W.	S.	do. do. do. sea breeze set in at 5 P. M.
13	30·01	—·98	—·90	82½	85	85	0·1	W.	E.	do. do. do. cool in the day do.
14	29·97	—·96	—·85	82	88	85	,,	W.	E.	Clear A. M. strong winds, sea breeze set in at 3 P. M.
15	*—·95*	*—·95*	*—·90*	*81*	*86*	*85*	*1·16*	*W.*	*E.*	*Cloudy, heavy rain and lightning from 1 to 6 A. M. sea breeze set in at 1 P. M.*
16	—·98	—·96	—·90	82½	84½	84	1·1	W.	S. E.	Cloudy, heavy rain and lightning from 1 to 5 A. M. sea breeze set in at 3 P. M.
17	—·95	—·96	—·90	82½	85	85	,,	W.	S. W.	Haze A. M. light rain from 4½ to 6 P. M.
18	—·97½	—·97	—·94	82½	82½	85	0·2	W.	N. E.	Clear A. M. drizzly during the day, calm P. M.
19	—·98	—·97	—·90	84	86½	85½	,,	S. W.	S. W.	do. heavy dew do.
20	30·02½	—·97	—·91	80½	84	85	0·3½	W.	S. W.	Cloudy, light rain from 3 to 7 A. M. do.
21	29·98	—·97	—·90	83	88	83½	,,	W.	S. W.	Haze, heavy dew, sea breeze set in at 1 P. M. cloudy P. M.
22	—·99	—·90	—·88	80½	86½	85½	0·8½	W.	E.	do. rain during last night, sea breeze at 2 P. M.
23	—·93	—·92	—·88	85	85	86	,,	W.	N. E.	Clear A. M. cool in the day do. 3 P. M.
24	—·96	—·93	—·89	84	88	85½	,,	S. W.	N. E.	do. do. do. 3. P. M.
25	—·94	—·96	—·87	84	87	86	,,	W.	S. W.	do. sultry calm P. M.
26	—·93	—·94	—·88	83	87	86½	,,	W.	N. E.	do. do. do.
27	—·94	—·90	—·88	84	88	86½	,,	N. W.	N. E.	do. do. do.
28	—·93	—·94	—·88	84½	88½	86½	,,	N. W.	N. E.	do. do. do.
29	—·90	—·97	—·87	85	89½	86	,,	W. by S.	N. E. S. E.	do. do. rain from 6½ to 7½ P. M. calm P. M.
30	—·93	—·91	—·86½	84	89	86½	0·2	W. by S.	N. E. S. E.	do. do. light rain from 4½ P. M. do.

The above Observations were kept at the Fort Dispensary.

Barometer.	
Mean maximum	29·95
Mean minimum	29·88
General mean	29·92½
Height from ground floor of Dispensary 2 feet 7¼ inches.	
Thermometer.	
Mean maximum	86°
Mean minimum	12°
General mean	84°8
Mean daily range	3°6
In. 20ths.	
Amount of rain	6 1½
Number of days on which rain has fallen	20
during the month	
Prevailing winds.	A. M. Westerly
	P. M. SE. SW. & NE.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN OCTOBER 1840.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P.M.	Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	P. M.	WEATHER.
1	29·94	29·90	29·85	84	90	88	——	W.	N. E.	Clear A. M. sultry at noon—calm P. M.
2	—·90	—·88	—·85	85	88	88	——	W.	N. E.	do. do. do. and sultry.
3	—·91	—·90	—·90	86	87	87	0· 3¾	W.	N.	do. rain at 10½ A. M. sea breeze set in at 11 A. M.
4	—·94	—·94	—·90	85	86	86½	0· 10	N.	N. E.	Haze, heavy rain at 11 A. M. calm P. M.
5	30·02¼	30·04	—·94	83	86	85	0· 5¼	W.	N. E.	Heavy black clouds N. rain with thunder 10 A. M., sea breeze at 2 P. M.
6	—·05	—·03	—·94	85	87	86	——	W.	N. E.	Heavy dew, clear A. M. cool at noon, sea breeze at 1 P. M.
7	—·05	—·00	—·94	85	87	86	——	W.	S. E.	do. do. do. do. sultry at night.
8	—·03	—·00	—·94	85	87½	86	——	W.	S. E.	do. do. do. do. do.
9	29·99	29·95	—·94	83½	86	86	——	W.	S. E.	Partial dew do. sea breeze at 1 P. M. do.
10	—·98	—·95	—·90	84	86	86½	——	W.	S. E.	do. do. do. 12 P. M. do.
11	30·00	30·00	—·98	85	87	86	——	N. W.	N. E.	do. do. do. 10 A. M. cool at night.
12	—·00	—·05	—·97	83	88	86½	——	N. W.	N. E.	do. do. do. 10 A. M. sultry P. M.
13	—·03	29·98	—·94	85	85	86½	——	N. W.	N. E.	Drizzly 6 A. M. do. 10 A. M. do.
14	—·00	—·97	—·94	82½	85	86	——	N. W.	N. E.	do. and lightning A. M. calm P. M.
15	—·03	30.00	—·95	83	87	87	——	N. W.	N. E.	Partial dew, clear A. M. cool at noon.
16	—·05	—·03	30·00	81½	87½	86	——	W. byS.	E.	Drizzly A. M. do.
17	—·08	—·07	—·04	85	87½	86	——	W. byS.	S. E.	Partial dew, clear A. M. sea breeze 1 P. M.
18	—·09	—·05	—·00	83	87	86	——	W. byS.	S. E.	do. do. do. 2 P. M.
19	—·07	—·09	—·05	82	87½	86½	——	W.	S. E.	do. do. Cloudy P. M.
20	—·12	—·15	—·05	81½	87	86	——	W.	N. E.	Heavy dew do. do.
21	—·15	—·13	—·07	80	87	86	——	W.	N. by E.	Partial dew do. calm P. M.
22	—·10	—·10	—·04	79	87	85½	——	N. E.	N. by E.	Clear A. M. light winds do.
23	—·10	—·07	—·04	79	86½	83½	——	N.	N. by E.	Drizzly, partial clouds A. M. strong winds, cool P. M.
24	—·10	—·10	—·04	78	86	85	——	N.	N. by E.	Cloudy A. M. strong winds, calm P. M.
25	—·07	—·10	—·04	79	87	85	——	N.	N. by E.	Raining A. M. strong winds, heavy rain with lightning P. M.
26	—·10	—·05	—·02	79½	79½	79½	1—.	N. E.	N. by E.	do. sea breeze 6 P. M. do. do.
27	—·08	—·04	—·04	79½	82	80	2· 11	N. E.	N. E.	Cloudy A. M. heavy rain with lightning 3. P. M.
28	—·08	—·09	—·03	78½	81½	82	0· 12	N. E	E.	Raining A. M. with thunder and lightning, sea breeze 4 P. M., heavy rain P. M.
29	—·08	—·07	—·06	81½	83	82½	2—.	N. E.	E.	Raining A. M. strong winds, sea breeze 4 P. M.
30	—·08	—·05	—·03	81½	85	83	9	N. E.	N. E.	do. A. M. sultry at noon do. 6 P. M.
31	—·09	—·05	—·02½	81	85	83½	——	N. E.	N.E.ybE.	Clear A. M. partial dew do. 5 P. M.

In. 20ths.

Amount of rain..... 7 11

Number of days on which rain has fallen during the month. 13

Prevailing winds. A.M. W. N. E. N. P.M. W.N.W. byS. P.M. N.E.S.E.E N.

Thermometer.

Mean maximum....86°80
Mean minimum.....83°46
General mean.....84°60
Mean daily range... 3°85

Barometer inches.

Mean maximum....30·04
Mean minimum....29·98
General mean.....30·01
Height from ground floor of Dispensary 2 feet 7¾ inches.

The above Observations were kept at the Fort Dispensary.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	P. M.	WEATHER.
1	30·10	30·10	30·02½	78½	84½	83½	———	N. E.	N. E.	Heavy dew, clear A. M. cool at noon sea breeze set in at 6 P. M.
2	—·10	—·10	—·03	77	84	83½	———	N. E.	N. E.	do. do. do. at 5½ P. M.
3	—·05	—·05	—·03	75	85	84	———	N. E.	N. by E.	Partial dew do. do. at 6 P. M.
4	—·05	—·05	—·03	82½	85	83½	———	N. by E.	N. E.	Partial dew, drizzly 8 A. M., heavy rain at 3 P. M. with thunder and lightning.
5	—·12	—·10	—·05	80½	81½	80½	3·7	N.	N. E.	Raining A. M., cloudy P. M., heavy rain during night.
6	—·13	—·10	—·04	77½	80½	80	1·7	N. N. E.	N. by E.	do. do. do.
7	—·04	—·02	29·96	81½	81½	80½	·10	N. N. E.	N. by E.	Cloudy rain at 8 A. M. and continued throughout the night with thunder and lightning.
8	—·05	—·03	—·95	79	78½	80	3·10	N. N. E.	N. by E.	Raining A. M. continued throughout the night.
9	—·00	—·00	—·95	78	78	77	·15	N. N. W.	N. by E.	do. do. do. strong winds.
10	29·95	—·00	—·97	76½	75½	77	3·10	N. N. W.	N. E.	do. do. do.
11	—·94	29·93	—·93	77½	77	77	2·16	N. by W.	N. E.	do. do. do.
12	—·94	—·90	—·84	79	79½	79½	1·15	N.	N. E.	do. do. do. strong winds P. M.
13	—·88	—·85	—·83	73½	74½	73	2· 4	N.	N.	do. do. do. do.
14	—·89	—·89	—·87½	74	73½	77	1·11	N. by W.	N.	do. A. M. cloudy P. M.
15	—·94	30·00	—·94	72½	77	72	———	N.	N. by E.	Haze A. M. clear P. M.
16	30·00	—·00	—·98	71½	79	77½	———	N.	N. by W.	Partial dew, clear A. M. do.
17	—·01	—·00	30·00	71½	79½	78	———	N.	N. E.	Heavy dew do. do.
18	—·07	—·05	—·00	74	79	78½	———	N.	N. E.	do. do. do.
19	—·10	—·05	—·00	72	79½	78	———	N. E.	N. E.	do. do. do.
20	—·10	—·05	—·00	72	79½	78½	———	N. E.	N. E.	Heavy dew, clear A. M., cold winds, partial clouds P. M.
21	—·10	—·08	—·04	75	81	78	———	N. E.	N. E.	Partial dew do. do.
22	—·20	—·20	—·10	74	80½	78	———	N. E.	N. E.	do. do. do.
23	—·22	—·20	—·10	75	81	79	———	N. E.	N. E.	Heavy dew do. partial clouds P. M.
24	—·15	—·13	—·09	75	80½	79½	———	N. E.	N. E.	Partial dew do. cloudy P. M. and lightning.
25	—·10	—·10	—·08	75	81	80½	———	N. E.	N. E.	do. cloudy A. M. do. do.
26	—·15	—·14	—·10	79	83	81	———	N. E.	N. E.	do. do. do. do.
27	—·21	—·20	—·15	76	80	80	·9	N. E.	N. E.	Rain at 2 A. M. do.
28	—·20	—·18	—·15	80	81½	80	———	N. E.	N. E.	Cloudy and drizzly A. M. do.
29	—·18	—·15	—·12	75	81½	81	———	N. E.	N. E.	Heavy dew, cloudy A. M. partial clouds P. M.
30	—·19	—·16	—·11	79	82	80½	———	N. E.	N. E.	do. haze A. M. do.

Barometer.		In. 20ths.	
Mean maximum	30.06	Amount of rain	21·14
Mean minimum	30.01	Number of days on which rain has fallen during the month	13
General mean	30.04		
Height from ground floor of Dispensary 2 feet 7¾ inches.		Prevailing winds.	A.M. N. E. by. N. N. W. by. P.M. N. E. by. N. N. W. by.
Thermometer.			
Mean maximum	80°·13		
Mean minimum	·76 ·20		
General mean	·78 ·51		
Mean daily range	4 ·31		

The above observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN DECEMBER, 1840.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	P. M.	WEATHER.
1	30·12	30·15	30·12	81	80	80½		N. E.	N. E.	Partial dew, clear A. M. Partial clouds P. M.
2	—·20	—·20	—·15	76½	83	81		N. E.	N. E.	do. do. do. do.
3	—·15	—·13	—·08	75⅝	82⅛	80½		N. E.	N. E.	Heavy dew do. do. do.
4	—·07	—·15	—·10	75	81	80		N. E.	E. S. E.	do. do. clear P. M.
5	—·15	—·12	—·09	65	79½	80½		N. E.	N. E.	do. do. do.
6	—·18	—·15	—·15	76	81½	80½		N. E.	N. E.	do. do. do. strong winds.
7	—·19	—·17	—·12	79	81½	80½		N. N. E.	N. E.	Clear A. M. cloudy P. M. strong winds.
8	—·15	—·15	—·12	80	80½	80½		N. E.	N. E.	Cloudy A. M. strong winds, drizzly 7 A. M. cloudy P. M. strong wind.
9	—·20	—·20	—·14	80½	82	81		N. E.	N. E.	do. do. cloudy P. M.
10	—·22	—·22	—·15	79	82	81		N. E.	N. E.	do. clear P. M.
11	—·22	—·22	—·15	75	81	80		N. E.	N. E.	Heavy dew, cloudy A. M. clear P. M.
12	—·17	—·17	—·15	76	81½	80½		N. E.	N. E.	do. do. do.
13	—·17	—·17	—·11	74	81	80		N. E.	N. E.	do. do. do.
14	—·17	—·17	—·11	79	81	80		N. E.	N. E.	Haze A. M. clear P. M.
15	—·14	—·16	—·11	79	82	80½		N. E.	N. E.	do. do.
16	—·14	—·16	—·06	72½	82	80		N. E.	N. E.	Heavy dew, clear A. M. clear P. M.
17	—·15	—·13	—·07	74	80½	79½		N.	N. E.	do. do. do.
18	—·09	—·09	—·05	74⅜	80½	79		N. E.	N. E.	do. do. do.
19	—·13	—·15	—·09	75	81½	79		N. E.	N. E.	do. do. do.
20	—·15	—·15	—·09	74	81	79		N. E.	N. E.	do, do. do.
21	—·15	—·15	—·11	77	81½	79½		N. E.	N. E.	do. do. do.
22	—·15	—·15	—·10	77⅜	81½	78½		N. E.	N. E.	Clear A. M. cloudy P. M.
23	—·14	—·15	—·15	78	81	80½		E. S. E.	E. N. E.	Cloudy A. M. a few drops of rain with strong winds, cloudy P. M.
24	—·20	—·15	—·15	76	82	81½		N. E.	N. E.	do. do. do.
25	—·20	—·20	—·15	79	83	82½		N. E.	N. E.	Partial dew. clear A. M. clear P. M.
26	—·15	—·15	—·15	75½	82	81		N. E.	N. E.	Heavy dew do. do.
27	—·20	—·20	—·15	79	82	80½		N. E.	N. E.	Partial dew do. do.
28	—·15	—·15	—·09	74	81	79½		N. E.	E. N. E.	Heavy dew do. do.
29	—·13	—·15	—·09	74	80½	79½		E. N. E.	E. N. E.	do. do. do.
30	—·11	—·11	—·09	74	78	79		E. S. E.	E. N. E.	do. do. do.
31	—·14	—·14	—·09	73	80½	79		E. S. E.	E. N. E.	do. do. do.

In. 20ths.

Amount of rain.....a few drops on the 23d & 24th.
Number of days on which rain has fallen during the month. 5
Prevailing winds.. { A. M. N. E.
P. M. N. E.

Thermometer.

	°
Mean maximum	81
Mean minimum	76
General mean	79
Mean daily range	4

Barometer. inch.

Mean maximum	30 15
Mean minimum	30 11
General mean	30 14
Height from ground floor of the Dispensary 2 feet 7½ inches.	

The above observations were kept at the Fort Dispensary.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	30·13	30·13	30·05	72½	81	81		S. S. E.	E. S. E.	Heavy dew, clear A. M. clear P. M.
2	—·17	—·17	—·08	76	80½	79½		S. E.	„	do. do. do.
3	—·13	—·13	—·09	75	80½	79		„	„	do. do. do.
4	—·17	—·17	—·09	74	81	80		N. E.	„	do. do. do.
5	—·17	—·19	—·10	79	82½	81		„	„	Cloudy a few drops of rain at 7 A. M. do.
6	—·20	—·20	—·13	80	80	80½		„	E. N. E.	Haze A. M. clear P. M.
7	—·15	—·20	—·13	75½	76½	80	·—·64	N. N. E.	„	Cloudy rain at 7 A. M. and cold at interval during the day and night.
8	—·17	—·20	—·15	79	81	80	·—·194	N. E.	N. E.	Cloudy A. M. clear P. M.
9	—·15	—·20	—·14	73	80½	79		„	„	Heavy dew, haze A. M. clear P. M.
10	—·21	—·21	—·13	79½	81½	80		„	„	Partial dew, do. do.
11	—·21	—·18	—·10	79½	82	80½		N. N. E.	„	do. do. do.
12	—·13	—·18	—·10	74	81	80		„	„	Heavy dew, do. do.
13	—·15	—·15	—·07	74	81½	80		„	„	do. do. do.
14	—·12	—·13	—·05	76	79	80	·—·7	„	„	Cloudy rain at 7 A. M. and 1 P. M. cloudy P. M.
15	—·12	—·12	—·08	76	82	80½	·—·1½	„	„	Heavy dew, haze A. M. clear P. M.
16	—·10	—·12	—·07	74½	82	81		„	„	do. do. do.
17	—·14	—·12	—·07	74	82	81		„	„	do. do. do.
18	—·12	—·12	—·07	73½	82½	81		„	„	do. do. do.
19	—·19	—·19	—·08	75½	83	81		„	E.	do. do. do.
20	—·15	—·15	—·07	75½	82	81		S. S. E.	S. S. E.	do. do. do.
21	—·15	—·15	—·06	78½	82	81		N. N. E.	„	do. do. do.
22	—·15	—·15	—·10	77½	82	81		„	S. E.	do. do. do.
23	—·19	—·19	—·06	77½	83	81		„	„	do. do. do.
24	—·19	—·19	—·10	80	83	82		„	„	Clear A. M.—Partial clouds P. M.
25	—·18	—·19	—·10	80½	83	82		„	N. E.	Partial clouds A. M. do.
26	—·20	—·20	—·09	80	82	81		N. E.	„	do. clear P. M.
27	—·13	—·20	—·10	80½	83	82		„	„	Clear A. M. do.
28	—·15	—·15	—·12	76½	83	81½		„	N. by E.	Heavy dew clear A. M.
29	—·15	—·15	—·10	79½	83	81½		„	„	do. do. do.
30	—·12	—·12	—·05	77½	80½	80		„	„	Partial dew do. do.
31	—·12	—·10	—·04	76	82½	81½		„	S. E.	do. do. do.

The above Observations were kept at the Fort Dispensary.

In. 20ths. 1 15

Barometer.
Mean maximum.....30·16
Mean minimum.....30·08
General mean.....30· 3
Height from ground floor of Dispensary 2 feet 7½ inches.

Thermometer.
Mean maximum..81°·58
Mean minimum....76 ·77
General mean.....79·65
Mean daily range..5 ·08

Amount of rain...
Number of days on which rain has fallen during the month
Prevailing winds. A. M. N. Ey. 27 S. Ey. 4 P. M. 1912

REGISTER OF METEOROLOGICAL OBSERVATIONS.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN FEBRUARY, 1841.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	30·12	30·12	30·04	77	82¼	81½	—	N. N. E.	S. E.	Heavy dew, clear A. M. clear P. M.
2	—·10	—·10	—·04	77	82	81½	—	S. W.	,,	do. Haze A. M. do.
3	—·14	—·16	—·10	77	82	81	—	,,	,,	do. Clear A. M. do.
4	—·17	—·18	—·16	77	84	81½	—	W. by S.	,,	do. do. do.
5	—·19	—·20	—·16	76	83¼	81½	—	E.	S. E.	do. Haze A. M. do.
6	—·19	—·19	—·15	76	84	82	—	N. E.	E. by S.	do. Clear A. M. do.
7	—·20	—·20	—·14	74	83	82	—	,,	,,	do. do. do.
8	—·16	—·16	—·14	75	81½	81	—	,,	,,	do. do. do.
9	—·20	—·20	—·14	74	82	81½	—	,,	S. E.	do. do. do.
10	—·20	—·20	—·13	76	82	81½	—	,,	,,	do. do. do.
11	—·18	—·20	—·13	74	82	81½	—	N. N. E.	E.	oo. do. do.
12	—·18	—·20	—·13	14½	83	81½	—	N. E.	N. E.	do. do. do.
13	—·18	—·20	—·14	75	84	82	—	S. E.	E. by S.	Cloudy A. M.—Cloudy P. M.
14	—·21	—·22	—·14	81	84½	82	—	N. E.	E. by S.	do. do.
15	—·20	—·25	—·21	81	83	79½	—	,,	N. E.	do. and drizzly A. M. Cloudy A. M
16	—·26	—·26	—·20	77	84	81½	—	,,	,,	Cloudy A. M.—Cloudy P. M.
17	—·24	—·26	—·20	80½	85	81½	—	,,	,,	Partial Clouds A. M. partial clouds P. M
18	—·23	—·23	—·20	81½	85	82	—	,,	,,	Haze A. M. Clear P. M.
19	—·23	—·23	—·20	77	84	82½	—	,,	E. by S.	do. do.
20	—·21	—·21	—·20	76	84	82½	—	,,	,,	Partial dew clear A. M. Clear P. M.
21	—·26	—·30	—·22	81	84	82½	—	,,	,,	do. Haze A. M. do.
22	—·25	—·26	—·19	80½	84	82½	—	,,	N. E.	do. Clear A. M. do.
23	—·16	—·20	—·12	73	83½	82	—	,,	E. by S.	do, do. do.
24	—·14	—·14	—·12	74	83½	81½	—	E. by S.	E. N. E.	do. do. do.
25	—·14	—·14	—·08	76	85	82½	—	E. N. E.	,,	do. do. do.
26	—·15	—·15	—·08	77½	82½	82	—	,,	E. by S.	do. Haze A. M. do.
27	—·14	—·16	—·05	77½	82	82	—	,,	,,	do. Clear A. M. do.
28	—·07	—·09	—·02	77½	83	82	—	,,	,,	do. do. do.

In. 20ths.

Amount of rain.....0

Number of days on which rain has fallen during the month. } 1 day dizzling rain.

Prevailing winds. } A. M. N. E. P. M. S. E. &do.

Barometer.		Thermometer.	
Mean maximum.....	30·19	Mean maximum.....	83°20
Mean minimum.....	30·13	Mean minimum.....	76 91
General mean.....	30·17	General mean.....	80 64
Height from ground floor of the Dispensary 2 feet 7¼ inches.		Mean daily range...	6 01

The above Observations were kept at the Port Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN MARCH, 1841.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	30·05	30·05	29·98	79	83	82		S. E.	S. E.	Partial dew, clear A. M. clear P. M.
2	—·05	—·03	—·95	80	83½	82		,,	,,	do. do. do.
3	—·10	—·13	30·05	81½	85	82¼		,,	,,	Cloudy and drizzly A. M. clear P. M.
4	—·08	—·09	—·04	81	83	82½		N. E.	E. by S.	Partial clouds A. M. do.
5	—·09	—·11	—·07	81	83¼	82		,,	S. E.	do. do.
6	—·12	—·15	—·07	81	83½	82½		S. E.	,,	Partial dew clear A. M. do.
7	—·12	—·15	—·05	79	83½	82½		,,	,,	do. Haze A. M. do.
8	—·06	—·06	29·99	78	83¼	81½		,,	E. by N.	do. do. do.
9	—·04	—·04	—·99	80½	84	83		,,	,,	Clear A. M.—clear P. M.
10	—·04	—·10	30·01	81	85	84		,,	N. E.	do. do.
11	—·04	—·04	—·01	82	85½	84		,,	,,	do. do.
12	—·04	—·01	29·95	82	86	84		S. W.	S. S. E.	do. strong winds clear P. M.
13	—·00	—·01	—·95	82½	85½	84½		S. E.	S. E.	Partial dew clear A. M. do.
14	—·05	—·05	—·98	84	85½	84½		,,	S. S. E.	do. do. do.
15	—·05	—·05	30·00	83	86½	85		S. S. E.	S. E.	Clear A. M.—clear P. M.
16	—·04	—·04	—·00	82½	86½	85		S.	S. S. E.	do. do.
17	—·01	—·01	—·00	83	86	85		,,	,,	do. do.
18	—·04	—·04	—·00	82½	85	84		,,	,,	do. do.
19	—·07	—·10	29·29	83	85½	85		S. S. E.	E. by S.	do. do.
20	—·07	—·07	—·98	83	85	84		,,	S. S. E.	do. do.
21	—·07	—·07	—·99	84	86	85		,,	S. E.	do. do.
22	—·07	—·07	30·02	82	84	84		,,	E. by S.	do. do.
23	—·10	—·10	—·02	83	84	83½		,,	,,	do. do.
24	—·10	—·10	—·00	82½	85	83½		,,	,,	do. do.
25	—·06	—·10	—·00	81	85	83½		,,	S. E.	Partial dew, haze A. M. clear P. M.
26	—·11	—·10	—·00	82	85	83½		,,	,,	do. clear A. M. do.
27	—·04	—·04	—·01	81½	85	83		,,	,,	do. do. do.
28	—·07	—·09	—·01	77½	86	84		,,	,,	do. do. do.
29	—·10	—·10	—·00	81	81½	85		,,	,,	Heavy dew do. do.
30	—·06	—·06	—·00	83½	86	85		,,	,,	do. do. do.
31	—·09	—·09	—·00	81½	87	85		,,	,,	Partial dew do. do.

The above observations were kept at the Port Dispensary.

Barometer.	
Mean maximum	30·07
Mean minimum	29·98
General mean	30·04
Height from ground floor of Dispensary 2 feet 7½ inches.	

Thermometer.	
Mean maximum	84 80
Mean minimum	81 58
General mean	83 24
Mean daily range	3 40

Amount of rain	In. 20ths 0 00
Number of days on which rain has fallen during the month	0
Prevailing winds.	A. M. S. Ey. P. M. S. Ey.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	30·14	30·10	30·00	84	87	86		S. E.	S. E.	Partial dew, clear A. M. clear P. M.
2	—·14	—·10	29·98	83½	87	86		S.	,,	do. cloudy A. M. cloudy P. M.
3	—·06	—·10	—·98	83½	87	85½		S. E.	S. by E.	do. do. do.
4	—·10	—·08	—·98	86	87	85½		,,	,,	Heavy dew, clear A. M. clear P. M.
5	—·10	—·08	—·96	85	87	85½		,,	,,	do. do. do.
6	—·02	—·00	—·96	86	87	85½		,,	,,	do. Partial clouds A. M. and P. M.
7	29·99	—·01	—·95	85	87½	85½		,,	S. E.	Partial dew, clear A. M. clear P. M
8	30·03	—·10	30·02	84	86	85		,,	,,	Cloudy A. M. cloudy P. M.
9	—·05	—·10	—·04	82	85	85		,,	E. by S.	Partial due, clear A. M. clear P. M.
10	—·05	—·06	—·00	82½	86	85		E. by S.	S. S. E.	do. do. do.
11	—·01	—·01	29·95	81½	86	85		S. E.	S. E.	do. do. do.
12	—·00	—·00	—·93	81½	86	86		,,	,,	do. do. do.
13	—·00	—·03	—·94	85½	88½	87		,,	S. S. E.	Clear A. M. clear P. M.
14	—·85	—·05	—·94	85½	88	87		,,	S. E.	Partial clouds, strong winds, cloudy P. M.
15	—·05	—·05	—·95	85	87½	86½		,,	,,	do. do. do.
16	—·00	—·00	—·92	84	87½	86½		,,	,,	do. Partial clouds, P. M.
17	—·00	—·05	—·92	85	88	86		,,	,,	do. do.
18	—·06	—·09	30·00	85	88½	87		,,	S. S. E.	Partial dew cloudy A. M. clear P. M.
19	—·10	—·10	—·00	85	88½	86		,,	,,	do. clear A. M. do.
20	—·09	—·10	—·00	85	88	86½		S. S. E.	,,	do. do. do.
21	—·06	—·07	—·00	85½	88	86½		,,	S. E.	do. do. do.
22	—·03	—·02	29·95	84½	87	86½		S. E.	,,	do. do. do.
23	—·02	—·02	—·95	85	86½	86		,,	,,	do. do. cool at noon do.
24	—·02	—·02	—·95	83½	86	86		,,	,,	do. do. clear P. M
25	—·02	—·05	—·98	85	87½	86½		,,	,,	do. do. do.
26	—·01	—·01	—·95	84	87	86		S. S. E.	,,	do. do. do.
27	—·02	—·02	—·93	84	87	86½		S. E.	,,	do. do. do.
28	—·05	—·07	—·95	86	88½	87		S. S. E.	S. S. E.	do. do. sultry do.
29	—·04	—·07	—·95	85½	88	85½	1¼	S. S. E.	,,	Rain with lightning at 4 P. M. cloudy P. M.
30	—·01	—·05	—·95	82½	84½	83	·19	W. by N.	N.	Heavy rain, thunder and lightning at 3¼ A. M. strong winds, heavy cloudy P. M.

Barometer. inch.
Mean maximum.....30 05
Mean minimum.....29 96
General mean.....30 02
Height from ground floor of the Dispensary 2 feet inches. 7½

Thermometer.
Mean maximum....87° 01
Mean minimum.....84 33
General mean.....85 75
Mean daily range... 2 73

In. 20ths.
Amount of rain... 1 01
Number of days on which rain has fallen during the month. 2
Prevailing winds.. { A. M. S. Ey. / P. M. do.

The above observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN MAY, 1841.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	30·02	30·03	29·95	83	85	83		E. by N.	E.	Cloudy A. M. cloudy P. M.
2	29·98	29·98	—·95	83	86	84½		E. by S.	E. by S.	do clear P. M.
3	—·96	—·94	—·83	84	87½	87		E. by S.	S. S. E.	Clear A. M. do.
4	—·88	—·90	—·94	85	87½	87		S. S. E.	S. E.	do. do.
5	—·93	—·93	—·81	86	88½	87		S. E.	S. E. by S	do. do.
6	—·94	—·90	—·85	87	89½	87		S. E. by S	S. by S.	do. do.
7	—·90	—·90	—·80	87	88	88		S. S. E.	S. E.	Cloudy and drizzly A. M. sultry partial clouds P. M.
8	—·85	—·80	—·84	86	100	90½		S. E.	E. by N.	Partial dew, clear A. M. land wind, clear P. M.
9	—·94	—·95	—·90	87	90½	89½		E. by N.	E. by S.	do. do. sea breeze 11 A. M. clear P. M.
10	—·97	30·00	—·96	86½	89	88		E. by S.	S. E.	do. do. do. do.
11	30·04	—·04	—·96	87	90	88½		S. E. by S	S. E.	do. do. do. do.
12	—·00	29·98	—·95	87½	96	89		S. E.	S. E.	do. do(sea breeze 12 A. M. strong winds, clear P. M.
13	29·95	—·95	—·85	87½	90½	88½		E. by S.	E. by S.	Clear A. M. sea breeze 12 A. M. clear P. M.
14	—·90	—·90	—·83	87	88	86½		E. by S.	E. by S.	do. do. 11½ do.
15	—·95	—·95	—·85	87½	89	87½		S. E.	S. E.	Cloudy A. M. rain at 7 P. M. with vivid lightning and thunder continued at intervals during the night.
16	—·84	—·76	—·30	82	80	82	2,12	N.	N.E.&S.	Raining all day and night strong gale at 2 P. M. winds S. W. 8 P. M. become calm at ¼ past 7 and 8, the wind suddenly change W. S.
17	—·75	—·73	—·72	81½	84	81	1,2	S.	S. by W.	Cloudy and drizzly, strong winds.
18	—·85	—·55	—·84	80	81	80	11	S.	S.	Cloudy A. M. rain at 9 P. M. partial clouds P. M.
19	—·97	—·95	—·90	81½	86	85		W.	S. by N.	do. do. do.
20	30·01	—·96	—·95	83	88	86½		S. W.	S.	Clear A. M. black clouds to westward
21	29·95	—·97	—·97	84	89	87		S. W.	S. E.	Partial clouds A. M. clear P. M.
22	—·97	—·98	—·97	84	90	86		S. E.	S.	do. do.
23	—·95	—·95	—·90	85	94	87		S. W.	S. E.	Clear A. M. do.
24	—·90	—·94	—·85	85	94	88½		S. W.	S. E.	do. do.
25	—·95	—·95	—·82	84	88	88		S.	S. E.	do
26	—·95	—·9	—·90	86	88	87		S. W.	S. E.	doo
27	—·94	—·95	—·87	85	87	87		S. W.	S. E.	Cloudy
28	—·90	—·94	—·85	85	93	85		S. W.	S.	Clear A. M.
29	—·92	—·90	—·85	85	92	89		S. W.	S.	do.
30	—·90	—·83	—·85	86	87	87		S. W.	S.	do.
31	—·88	—·84	—·80	85	87	86		S. W.	S.	Cloudy A. M.

In 30 days. Amount of rain . . 4,5
Number of days on which rain has fallen during the month . . 3
Prevailing winds. A.M.S. Ey.& variable. P.M.S. Ey. Sy.&do

Thermometer	
Mean maximum...	88·80
Mean minimum...	84·90
General mean.....	86·30
Mean daily range...	3·62

Barometer.	
Mean maximum.....	29·93
Mean minimum.....	29·85
General mean.....	29·91
Height from ground floor of Dispensary 2 feet 7¾ inches.	

The above Observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN JUNE, 1841.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P.M.	Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	29·84	29·85	29·79	84	87	86½	——	S. W.	S. W.	Clear A. M. clear P. M.
2	—·90	—·88	—·80	85	90	88	——	S. W.	SWWS	Clear A. M. clear P. M. sea breeze at 2 cloudy at night.
3	—·87	—·85	—·78	86	88	87	——	S. W.	S. W.	Clear A. M. clear P. M.
4	—·84	—·80	—·75	87	93	90	——	S. W.	S. W.	Clear and sea breeze A. M. cloudy drizzly and thunder at 4 P. M.
5	—·85	—·83	—·77	88	93	87	——	W.	S. W.	Clear A. M. partial clouds and partial rain at 2 P. M.
6	—·85	—·85	—·83	86	95	93	——	W.	S. W.	Partial clouds, drizzly A. M. clear P. M.
7	—·94	—·90	—·86	89	92	93	——	W.	S. E.	Clear A. M. partial clouds P. M.
8	—·94	—·90	—·85	88	93	88	——	W.	S. W.	Clear A. M. sea breeze at 2 very cloudy, thunder and lightning severely.
9	—·90	—·87	—·84	87	94	87	——	W.	S. W.	Clear A. M. cloudy P. M. sea breeze at 2 P. M. until 8, cloudy with lightning.
10	—·92	—·90	—·85	83	89	88	——	W.	S. W.	Clear A. M. Clear P. M.
11	—·90	—·90	—·87	87	93	86	——	W.	S. E.	Clear A. M. thunder with rain at 3. P. M. [lightning.
12	—·90	—·85	—·85	86	89	87	0,7	S.W.W	S. E. S.	Clear A. M. sea breeze at noon heavy clouds from the west with thunder and
13	—·90	—·84	—·85	86	89	86	——	SWSE	S.E.S.W	Clear A. M. heavy clouds and rain P. M.
14	—·90	—·87	—·87	85	89	87	1,5	S. W.	S. E. S.	Clear A. M. sea breeze at 2 P. M.
15	—·90	—·90	—·90	85	90	83	——	S.W.W	S. E.	Partial dew clear A. M. sea breeze at 3 cloudy.
16	30·—	30·—	—·94	86	93	87	——	W.	S. E.	Partial dew clear A. M. sea breeze at 3 clear P. M.
17	29·92	29·97	—·82	86	92	89	——	S.	S. E.	do. do. do. ½ past 1 do.
18	—·95	—·95	—·90	86	90	87½	——	S.W.W	S. E. S.	Clear A. M. rain and thunder at 3 P. M.
19	—·93	—·95	—·90	85	87	87	0,13	W.	S. E.	Partial dew clear A. M. clear P. M.
20	—·95	30·—	—·90	85	87½	87½	——	W.	S. E.	Cloudy A. M. cloudy P. M.
21	30·—	29·95	—·89	85	89	88	——	W.	W.S.	Clear A. M. cloudy with thunder, lightning and rain at 7 P. M.
22	29·95	—·90	—·90	84	86	87	0,44	W.	W.	Cloudy A. M. heavy clouds P. M.
23	—·88	—·82	—·78	84	87	87	0,1	W.	W.	Cloudy A. M. rained at ½ past 5 P. M.
24	—·82	—·70	—·80	84	89	84	——	W.	W.S.W.	Cloudy A. M. rained from ½ past 4 to 10 P. M.
25	—·82	—·81	—·74	83	88	86	0,14	W.	S. S. E.	Clear A. M. cloudy with lightning P. M,
26	—·85	—·85	—·95	85	89	87	——	W.	W. S.	Clear A. M. heavy clouds to westward P. M.
27	—·87	—·85	—·83	84	88	87½	——	W.	W.S.W.	Clear A. M. partial dew rained at ½ past 9 P. M.
28	—·94	—·92	—·88	84	92	87	0,3	W.	W. E.	Clear and very sultry A. M. sea breeze at ½ past 1 clear P. M.
29	—·90	—·88	—·80	85	93	87	——	W.	W. S.	Clear A. M. night very close, clear P. M,
30	—·82	—·85	—·82	86	89	88	——	W.	W.S.E.	Clear A. M. rained ½ past 3, with thunder and lightning.

In. 25ths. 7¼

Amount of rain.....3

Thermometer.
- Mean maximum...90
- Mean minimum...85
- General mean.....87
- Mean daily range. 4

Number of days on which rain has fallen during the month. 9

Prevailing winds. A.M. E. W. & W. P.M. S. W. & SE. 68

Barometer.
- Mean maximum.....29·89
- Mean minimum.....29·84
- General mean.....29·87

Height from ground floor of the Dispensary 2 feet 7¼ inches.

The above Observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS MADE AT MADRAS IN JULY, 1841.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	P. M.	WEATHER.
1	29·92	29·85	29·87	86	88	84	½	W.	S. E.	Clear A. M. very sultry during night.
2	—·88	—·85	—·85	86	91	87	——	W.	S. E.	Clear A. M. very sultry.
3	—·90	—·90	—·87	86	91	87	——	W.	W.S.E.	Cloudy A. M. clear P. M. and very sultry.
4	—·89	—·91	—·89	86	89	88	——	W.	NWSE	Cloudy A. M. sea breeze at 7 P. M.
5	—·90	—·94	—·87	86	88	87	——	W.	S. E.	Clear A. M. sea breeze at 1 o'clock.
6	—·94	—·93	—·92	87	92	87	——	W.	S. E.	Clear A. M. sea breeze at 1 P. M. night very hot and oppressive.
7	—·95	—·94	—·90	86½	88	87	——	W.	S. E.	Clear A. M. night hot and sultry.
8	30·—	30·—	—·92	85	87	87	——	W.	W. E.	Clear A. M. cloudy at 3 P. M. rained at 3 A. M.
9	29·97	29·93	—·90	85	87	86	7½	W.	W. S. E.	Cloudy A. M. cool rained at ½ past 9 P. M.
10	—·92	—·90	—·90	84	90	87	2⅔	W.	W. S. E.	Clear A. M. night cool, day very hot sea breeze at 6 P. M.
11	—·92	—·92	—·89	85	87	86	——	W.	W. S.	Cloudy A. M. clear P. M: cloudy and drizzling at 5 P. M.
12	—·85	—·84	—·82	85	87½	87½	—1	W.	W.	Clear A. M. night sultry, heavy clouds and slight rain from 6 to 10 P. M.
13	—·88	—·84	—·88	84	86½	88	—2	W.	W.	Cloudy A. M. night cool.
14	—·90	—·84	—·80	85	92	88	——	W.	E.W.S.E.	Clear A. M. night very hot, morning cool and pleasant.
15	—·85	—·84	—·80	86	90	89	——	W.	W. S. E.	Clear A. M. sea breeze at 4 P. M. heavy clouds at P. M. shower of rain.
16	—·86	—·85	—·85	86	92	88	——	W.S.E.	S. E.	Clear A. M. sea breeze at 6 P. M.
17	—·93	—·95	—·90	86	90	88	——	W.S.E	S. E.	Clear A. M. sea breeze at 10 A. M.
18	—·98	—·90	—·86	86	88	87	——	W.	S. E.	Clear A. M. sea breeze from 1 P. M. to 5 A. M.
19	—·95	—·89	—·84	86	90	88	——	W.	S. E.	Clear A. M. rained at 4 P. M.
20	—·94	—·90	—·86	85	91½	88	—1½	S. W.	S. E.	Clear A. M. heavy clouds and rain at 6 P. M.
21	—·94	—·90	—·86	86	89	88	1	W.	E. S. W.	Cloudy all day, sea breeze at 2 P. M. high wind during night.
22	—·94	—·85	—·81	85	92	93	——	W.	W.	Clear A. M. oppressive during the day.
23	—·92	—·87	—·80	88	91	92	——	W.	W.	Clear A. M. sultry at noon and afternoon.
24	—·90	—·86	—·80	87	92	92	——	W.	W.	do. do.
25	—·87	—·85	—·81	87	93	93	——	W.	S. E.	Clear A. M. sea breeze at 5½ P. M.
26	—·87	—·83	—·82	87	94	88	——	W.	S. E.	Clear A. M. sultry at noon refreshing breeze and rain at 6 P. M.
27	—·92	—·90	—·85	86	92	87	7	W.	S. E.	Clear A. M, 1¼ P. M. partly sea breeze shower at 7 P. M. and again at 9 P. M.
28	—·90	—·85	—·80	84	93	87	——	S. W.	S. E.	Clear A. M. rain at 7 P. M.
29	—·90	—·85	—·82	85	92	87	——	W.	S. E.	Clear A. M. rain at sun set and puff of sea breeze.
30	—·90	—·85	—·80	85	92	87	——	S. W.	S. E. W.	Hazy A. M. disagreeable land wind, sultry at night.
31	—·95	—·90	—·90	87	93	85	——	W.	S. E.	Hazy A. M. sultry during the day, slight rain at 4¼ P. M. and pleasant in the evening.

The above observations were kept at the Fort Dispensary.

Barometer. Inches.
Mean maximum.....29·91
Mean minimum.....29·85
General mean.....29·88
Height from ground floor of the Dispensary 2 feet 7½ inches.

Thermometer. °
Mean maximum...90·33
Mean minimum...85·75
General mean....87·98
Mean daily range. 4·70

Amount of rain.... In. 20ths 1 3
Number of days on which rain has fallen during the month 12
Prevailing winds. A. M. West. P. M. S. E.

REGISTER OF METEOROLOGICAL OBSERVATIONS MADE AT MADRAS AUGUST, 1841.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	29·90	29·96	29·85	85	91	87		W.	S. E.	Clear A. M. pleasant in the evening.
2	—·97	—·92	—·90	85	95	85		,,	,,	Clear A. M. oppressive during the day but agreeable in the evening.
3	—·97	—·92	—·86½	85	89	87		,,	,,	Clear A. M. refreshing breeze in the afternoon.
4	—·95	—·92½	—·85	85	90	86		,,	,,	Clear A. M. rain last night.
5	—·95	—·92	—·85	83	88	85	5	,,	,,	Clear A. M. rain at 9 P. M.
6	—·97	—·93	—·90	83	87	86	1	,,	,,	Cloudy A. M. rain at sun set and during the night.
7	—·97	—·97	—·90	83	86	85	6¼	,,	,,	Cloudy A. M. hazy nearly all day, rain at 2 o'clock last night.
8	—·95	—·93	—·87½	82	85	84	1	,,	,,	Cloudy and drizzling A. M. very little sun during the day.
9	—·87	—·95	—·88	82	85	83		S. W.	,,	Cloudy A. M. pleasant during the day and rain at midnight.
10	—·97	—·92½	—·88	82	85	84	2	W.	,,	Cloudy A. M. rain in the afternoon and also at night.
11	—·94	—·90	—·90	83	85	84	7	,,	,,	Cloudy A. M. rain in afternoon and at night lightning.
12	—·93	—·90	—·90	83	86	84	14	S.	,,	Raining A. M. cloudy nearly all day with little or no rain.
13	—·90	—·90	—·90	83	86	83	2¼	S. E.	,,	Cloudy A. M. sultry at noon.
14	—·95	—·94	—·90	82	85	83		S. E.	,,	Cloudy A. M. which continued till noon.
15	—·94	—·94	—·90	83	85	83	3	E.	,,	Cloudy A. M. sultry at noon and rain at 9 P. M.
16	—·89	—·87	—·80	83	87	85		S. E.	,,	Cloudy A. M. rain at 4½ P. M. and also at night lightning.
17	—·87	—·87	—·80	82	86	84	1	S. E.	,,	Cloudy A. M. 2 or 3 heavy showers during the night.
18	—·89	—·90	—·84	82	85½	83	16¾	S. E.	,,	Cloudy A. M. pleasant during the day.
19	—·89	—·92	—·86	82	84	83		S.	,,	Cloudy A. M. slight dew and high wind during the night.
20	—·95	—·95	—·90	82	85	84		S.	,,	Cloudy A. M. sultry during the day and rain at night.
21	30·00	30·00	—·96	82	84	84	6	S.	,,	Cloudy and drizzling A. M.
22	—·02	—·00	—·97	82	84	84		S.	,,	Cloudy A. M. drizzling in afternoon and rain at night.
23	—·02	29·95	—·95	80	84	83	8	S. E.	,,	Cloudy A. M. pleasant during the day rain at night.
24	—·02	—·90	—·90	80	85	84	10	S. W.	S.	Cloudy and drizzling A. M. day fine.
25	29·90	—·92	—·85	82	83	84		W.	S. E.	Cloudy A. M. sultry during the day and thunder at night.
26	—·90	—·90	—·90	80	84	82	1	,,	S. W.	Cloudy A. M. thunder and looked over east at 5 P. M. rain at night.
27	—·97	30·00	—·92	80	84	82	1 11	,,	S. W.	Cloudy A. M. thunder, lightning rained at night.
28	30·02	—·00	—·92	80	84	82	1 18	,,	S. W.	Cloudy A. M. lightning in the evening.
29	—·00	—·00	—·92	80	84	82		,,	S. E.	Cloudy A. M. lightning in the evening heavy dew.
30	29·95	29·90	—·89	82	80	84		S. W.	S. E.	Clear A. M. and very pleasant, heavy dew.
31	—·95	—·90	—·89	82	84	84		S W.	S. E.	Clear A. M. pleasant day, thunder lightning and rain at night.

Barometer.	Inches.	Thermometer.	°
Mean maximum	29·91	Mean maximum	85·66
Mean minimum	29·88	Mean minimum	82·25
General mean	29·52	General mean	83·96
Height from ground floor of the Dispensury 2 feet 7¾ inches.		Mean daily range	3·75

	In. 20ths
Amount of rain	8 12
Number of days on which rain has fallen during the month.	17
Prevailing winds { A. M. P. M.	Westerly. S. E.

The above observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN SEPTEMBER, 1841.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	29·95	29·90	29·90	81	84	83	1 3	W.	S. W.	Dark, cloudy and raining A. M. thunder lightning and rain last night.
2	—·95	—·87	—·80	82	85	82	0 ¼	W.	S. W.	Cloudy A. M. thunder and rain P. M. clear moonshining night.
3	—·85	—·87	—·79	82	85	83		W.	S.	Clear A. M. pleasant day, lightning at night and dew.
4	—·85	—·87	—·80	82	85	84		W.	S.	Serene A. M. sultry day sky over cast and rain 6 P. M.
5	—·92	—·91	—·85	82	86	84	5	W.	S. E.	Serene A. M. slight rain in evening variable winds.
6	—·89	—·90	—·85	82	87	85		W.	S.	Clear A. M. heat comparatively intense. [at 6 P. M.
7	—·85	—·85	—·83	82	89	90		W.	S. E.	Clear A. M. oppressive day strong westerly high wind till 1 P. M. sea breeze
8	—·90	—·85	—·83	84	85	87		W.	S. E.	Clear A. M. dew.
9	—·90	—·85	—·85	83	85	84		W.	S. E.	Clear A. M.
10	—·90	—·90	—·85	83	88	84		S.	E.	Clear A. M. sea breeze.
11	—·90	—·90	—·85	85	87	86		W.	S. E.	do. do. do.
12	—·93	—·92	—·88	84	88	87		W.	E.	Cloudy A. M. rain thunder lightning at 7 P. M.
13	—·90	—·90	—·89	86	85	86	1 7	W.	E.	Cloudy A. M. sea breeze dew last night.
14	—·95	—·92	—·88	85	81	86		S. E.	S. E.	Clear A. M.
15	—·95	—·90	—·87	85	82	86		S.	S. E.	do. do.
16	—·90	—·90	—·85	84	82	86		W.	S. E.	Cloudy A. M. sultry day.
17	—·95	—·90	—·90	84	86	86		W.	S. E.	Cloudy A. M. drizzling at 7 P. M.
18	—·95	—·94	—·90	95	88	86		S. E.	S. E.	Cloudy and drizzling A. M. partly sea breeze.
19	30·00	—·93	—·90	85	87	86		S.	S. E.	Clear A. M. sultry day.
20	29·97	—·90	—·90	85	87	86		W.	S. E.	do. do. do.
21	—·97	—·90	—·92	85	87	86		W.	N. E.	Clear A. M. sultry sea breeze.
22	—·98	—·90	—·92	85	86	86		S. E.	S.	Clear A. M. sultry day, rain at 5 P. M. and at night.
23	—·97	30·00	—·92	85	85	86	2	N. W.	S.	Cloudy A. M.
24	—·97	29·97	—·95	83	88	85		W.	S.	Clear A. M.
25	30·00	—·92	—·95	84	87	85		W.	E.	Clear A. M. sea breeze pleasant day.
26	—·00	—·92	—·95	85	87	84		W.	E.	Clear A. M. sea breeze rain at 1 P. M.
27	29·97	—·95	—·90	85	90	88	2¼	W.	E.	Clear A. M. sea breeze.
28	—·95	—·90	—·88	84	91	88		W.	N. E.	Clear A. M. sea breeze thunder, lightning and rain.
29	—·92	—·90	—·88	84	90	88	8	W.	E.	Cloudy A. M. sea breeze oppressive day, rain P. M.
30	—·95	—·90	—·89	85	90	88	3	W.	E.	Clear A. M. oppressive day, sea breeze.

Barometer.	Inches.
Mean maximum	29·91
Mean minimum	29·84
General mean	29·89
Height from ground floor of Dispensary 2 feet 7½ inches.	

Thermometer	°
Mean maximum	86·43
Mean minimum	83·86
General mean	85·33
Mean daily range	3·43

In. 20/100

Amount of rain 3 11

Number of days on which rain has fallen during the month 11

Prevailing winds. A. M. W. 23, S. 3, S. E. 3, N. W. 1. P. M. S. E. 12 E 8 S. 6, N W. 5, & N E 2.

The above Observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN OCTOBER, 1841.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	P. M.	WEATHER.
1	29,95	29·90	29·90	84	88	88	,,	W.	S. W.	Clear A. M. sultry all day.
2	—·95	—·92	—·90	84	92	88	——	W.	E.&S.E.	Clear A. M. sultry and oppressive, sea breeze P. M.
3	—·98	—·93	—·92	85	91	88	——	W.	E.& S.E.	Clear A. M. oppressive day, sea breeze.
4	30·05	30·01	30·00	86	87	86	1	W.	E.	Clear A. M. shower at noon, sea breeze dew at night.
5	—·05	—·05	—·00	85	87	86	——	W.	E.	Clear A. M. some thunder and lightning. [night.
6	—·10	—·05	—·05	83	85	85	7	W.	E.	Cloudy, drizzling and thunder A. M. rain in forenoon sea breeze, rain at
7	—·10	—·05	—·05	84	85	85	11	W.	E.	Rain, thunder A. M. and also at midday, rain at night likewise.
8	—·12	—·15	—·06	83	86	86	3	N. W.	E.	Cloudy, and thunder A. M. sea breeze dew.
9	—·10	—·05	—·06	23	88	86	,,	N.	E.	Clear A. M. saltry noon, sea breeze rain.
10	—·05	—·10	29·98	82	81	84	1 4	N. W.	N. E.	Cloudy A. M. rain forenoon cloudy and sultry P. M. rain at night.
11	—·02	—·00	30·00	80	80	82	1 10	N. E.	N. E.	Cloudy and over cast A. M. constant rain wind variable.
12	—·05	—·05	—·02	80	80	80	3 12	N. E.	N. E.	Raining A. M. raining forenoon, very wet day altogether.
13	—·05	—·00	—·00	78	78	78	1 15	N. E.	N. E.	Downpour A. M. rain at noon and musky sky.
14	—·00	—·00	—·00	78	80	78	1	N. E.	N. E.	Cloudy A. M. rain at night.
15	—·02	—·00	29·93	78	80	82	1 8	N. E.	N. E.	Cloudy A. M. sultry day, rain at night.
16	—·05	—·00	30·00	78	84	82	5	N.	S. E.	Clear A. M. sultry day.
17	—·02	—·05	—·00	84	86	84	,,	S. E.	E.	Clear A. M. sea breeze, sunny day, rain at 3 P. M.
18	—·05	—·00	—·00	83	83	84	4	S. E.	E.	Raining do. alternate sun and clouds during the day.
19	—·05	—·00	—·00	82	85	84	,,	S. E.	E. by S.	Partial dew cloudy A. M. rain at 8 o'lock and at night also.
20	—·02	—·05	—·00	82	86	84	4	N. W.	E. by S.	Clear A. M. rain at night.
21	—·00	—·00	—·00	83	85	84	,,	Variable.	N.	Clear A. M. slight rain last night.
22	—·05	—·00	—·00	83	80	84	5	N. E.	N. E.	Clear A. M. rain all day and at night also.
23	—·05	—·00	—·01	83	81	83	3 3	N. E.	N. E.	Raining A. M. cloudy and overcast.
24	—·05	—·00	—·00	78	80	82	4	N. E.	N. E.	Clear A. M. rain in forenoon and all night.
25	—·05	—·05	—·00	79	81	79	17	N. E.	N. E.	Raining A. M. raining more or less all day.
26	—·05	29·98	29·98	79	83	78	1 ,,	N. E.	N. E.	Cloudy A. M. rain at night.
27	—·00	—·98	—·95	79	83	83	1 10	N. E.	N. E.	Raining A. M. and nearly all day.
28	29·95	—·90	—·90	78	80	79	1 6	N. E.	N. E.	Cloudy A. M. rain all day and night. [winds variable.
29	—·92	—·87	—·87½	79	82	80	2 18	N. E.	N. E.	Heavy rain A. M. thunder and lightning blowing half a gale of wind,
30	—·95	—·90	—·92	80	82	82	1 10	N. E.	N. E.	Raining A. M. strong gusts of wind, alternative showers.
31	—·97	30·03	—·95	80	85	82	1 10	E.	N. E.	Clear A. M. slight showers now and then.

Barometer. Mean maximum.....30·02 Mean minimum.....29·98 General mean.....0·00 Height from ground floor of the Dispensary 2 feet 7½ inches.

Thermometer. ° Mean maximum..83 67 Mean minimum...81 33 General mean.....82 72 Mean daily range, 3 03

In. 20ths. 8
Amount of rain.....24
Number of days on which rain has fallen during the month. 24
Prevailing winds. A. M. NE13W7SE4 NW3S2E1 calbe P. M. NE16SE8E25 S W 1 N 1

The above Observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS MADE AT MADRAS IN NOVEMBER, 1841.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	29·97	29·90	29·90	80	82	83		N. E.	N. E.	Cloudy A. M. hazy day, rain at night.
2	—·97	30·00	30·00	81	82	81	1 2	N. E.	N. E.	Cloudy A. M. rain all day and at night also.
3	30·00	—·05	—·05	79	82	81	1 3	N. E.	N. E.	Raining A. M. also during the day and night.
4	—·00	—·05	—·00	80	84	82	15	N. E.	N. E.	Cloudy A. M. alternate showers and sun.
5	—·00	—·00	—·00	81	84	82	11	N. E.	N. E.	Cloudy A. M. drizzling noon, raining at night.
6	—·04	—·00	—·00	80	84	84	5	N. E.	E.	Clear A. M. shower at noon, sultry day.
7	—·07	—·00	—·00	80	84	83		N. E.	N. E.	Clear A. M. heavy dew.
8	—·02	—·00	29·95	80	85	81		N. E.	N. E.	Clear A. M. dew rain at night.
9	—·02	—·00	30·00	80	84	84	2	N. E.	N. E.	Cloudy A. M. showers at noon and at night.
10	—·03	—·00	—·00	80	83	84	14	N. E.	N. E.	Cloudy A. M.
11	29·98	29·95	29·93	78	82	82		N. E.	N. E.	Clear A. M. dew, sultry.
12	—·97	—·97	—·98	78	84	82		N. E.	N. E.	Clear A. M. dew, sultry day.
13	30·00	—·98	—·98	78	84	82		N. E.	N E.	Clear A. M. dew.
14	—·00	30·00	30·00	78	84	82	3	N. E.	N. E.	Shower A. M. drizzling noon, clear P. M.
15	—·03	—·04	—·01	76	83	82		N. E.	N. E.	Clear A. M. dew wind at times blowing steadily from the north.
16	—·07	—·00	—·00	75	83	81		N. E.	N. E.	Clear A. M. dew do. do.
17	—·10	—·10	—·10	75	83	81		N. E.	N. E.	Clear A. M. dew do. do.
18	—·5	—·10	—·05	75	83	81		N. E.	N. E.	Clear A. M. dew do. do.
19	—·10	—·10	—·05	75	84	81		N. E.	N. E.	Clear A. M. dew do. do.
20	—·10	—·10	—·10	75	84	81		N. E.	N. E.	Clear A. M. dew do. do.
21	—·10	—·10	—·10	75	84	81		N. E.	N. E.	Clear A. M. dew do. do.
22	—·10	—·10	—·10	75	84	81		N. E.	N. E.	Clear A. M. dew do. do.
23	—·12	—·10	—·10	75	84	81		N. E.	N. E.	Clear A. M. dew do. do.
24	—·10	—·10	—·10	75	84	81		N. E.	N.	Clear A. M. dew
25	—·10	—·07	—·07	78	84	81		N. E.	N.	Clear A. M. dew drizzle during the day.
26	—·10	—·09	—·13	80	83	83	18	N. E.	N.	Hazy A. M. showers in the forenoon and at night.
27	—·12	—·07	—·07	80	83	83	12	N. E.	N. E.	Hazy A. M. flying clouds.
28	—·15	—·07	—·07	81	83	83		N. E.	N. E.	Hazy A. M. do.
29	—·10	—·10	—·10	80	83	83		N. E.	N. E.	Hazy A. M. pleasant morning.
30	—·10	—·10	—·10	78	83	83		N. E.	N. E.	Clear A. M.

Barometer.	Inches.
Mean maximum	30·05
Mean minimum	30·03
General mean	30·04
Height from ground floor of the Dispensary 2 feet 7¾ inches.	

Thermometer.	°
Mean maximum	83·43
Mean minimum	78·03
General mean	81·18
Mean daily range	5·06

	In. 20ths
Amount of rain	6 11
Number of days on which rain has fallen during the month	11
Prevailing winds. A. M.	N. E. 30.
Prevailing winds. P. M.	N. E. 26 N. 3 E. 1.

The above observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS MADE AT MADRAS, DECEMBER, 1841.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	P. M.	WEATHER.
1	30·10	30·11	30·10	78	83	83		N. E.	N. E.	Clear A. M.
2	—·12	—·11	—·10	77	83	83		,,	,,	Clear A. M. wind high.
3	—·10	—·12	—·10	75	83	83		,,	,,	Clear A. M. do. drizzling.
4	—·10	—·10	—·10	73	85	83		,,	,,	Hazy A. M. do. cloudy P. M.
5	—·10	—·10	—·10	80	85	83		,,	,,	Hazy A. M.
6	—·10	—·12	—·05	80	85	84		,,	,,	Clear A. M. flying clouds.
7	—·12	—·12	—·10	80	85	84		,,	,,	Clear A. M. dew, pleasant morning.
8	—·10	—·10	—·10	75	83	83		,,	,,	Clear A. M. dew do. do.
9	—·05	—·08	—·05	75	83	83		,,	,,	Clear A. M. dew do. do.
10	—·05	—·05	—·00	80	84	85		,,	,,	Clear A. M. dew do. do.
11	—·05	—·05	—·00	80	84	85		,,	,,	Clear A. M. dew do. do.
12	—·00	—·00	29·98	81	86	88		,,	,,	Clear A. M. dew
13	—·00	29·96	—·98	81	85	88		,,	,,	Clear A. M. dew
14	—·02	30·04	30·05	80	84	83		,,	,,	Clear A. M. dew
15	—·05	—·05	—·05	80	83	83		,,	,,	Clear A. M. flying clouds.
16	—·05	—·05	—·05	75	83	83		,,	,,	Clear A. M. dew.
17	—·05	—·05	—·05	74	83	83		,,	,,	Clear A. M. dew.
18	—·10	—·10	—·10	76	83	84		,,	,,	Clear A. M. dew.
19	—·10	—·10	—·10	75	83	84		,,	,,	Clear A. M. dew.
20	—·07	—·05	—·05	74	80	81		,,	,,	Clear A. M. dew.
21	—·10	—·15	—·05	75	80	80		,,	,,	Clear A. M. dew.
22	—·05	—·02	—·00	75	78	77		,,	,,	Cloudy A. M. dew cloudy all day, wind at times westerly.
23	—·05	—·10	—·07	76	78	80	1 3	,,	,,	Rain last night raining A. M. and murky cloudy day.
24	—·05	—·10	—·10	75	78	80		,,	,,	Clear A. M. flying clouds.
25	—·10	—·10	—·10	74	78	80		,,	,,	Clear A. M. do.
26	—·05	—·10	—·10	74	78	80		,,	,,	Clear A. M. dew do.
27	—·05	—·10	—·10	74	80	80		,,	,,	Clear A. M. dew do.
28	—·05	—·05	—·04	75	80	80		,,	,,	Clear A. M. dew do.
29	—·05	—·10	—·10	75	80	81		,,	N.	Clear A. M. dew wind at times northerly.
30	—·06	—·05	—·05	75	80	81		,,	N. N. E.	Clear A. M. dew cloudy day.
31	—·08	—·05	—·05	75	80	81		,,	N.	Clear A. M. dew flying clouds, cloudy P. M. and small rain.

Barometer.	Inches.	Thermometer.	°
Mean maximum	30·04	Mean maximum	82·45
Mean minimum	30·00	Mean minimum	76·67
General mean	30·06	General mean	80·38
Height from ground floor of the Dispensary 2 feet 7½ inches.		Mean daily range	5·96

In. 20th.

Amount of rain.. 1 3
Number of days on which rain has fallen during the month. 3
Prevailing winds.. A. M. N. E. 31. P. M. N. N. E. 29 N. 2.

The above observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN JANUARY, 1842.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Pluviometer inches from noon to noon.	Wind A. M.	Wind P. M.	WEATHER.
1	30·05	30·05	29·98	75	75	75	7	N.	N.&Var.	Cloudy and windy A. M. small rain blowing fresh.
2	—·05	—·05	30·05	75	78	78		N.	N.	Cloudy A. M. rather cloudy day although fine.
3	—·05	—·02	—·00	75	80	81		N.	N. E.	Clear A. M. flying clouds, cloudy P. M.
4	—·05	—·05	—·05	75	80	80	7	N. E.	,,	Cloudy A. M. showers during the day, rain at night.
5	—·10	—·10	—·10	78	82	82	10	N. N. E.	,,	Cloudy A. M. cloudy at noon.
6	—·10	—·10	—·12	78	82	82		N. E.	,,	Clear A. M. flying clouds.
7	—·10	—·10	—·12	78	82	82		,,	,,	Clear A. M. do.
8	—·10	—·12	—·12	75	82	82		,,	,,	Clear A. M. do.
9	—·10	—·12	—·12	75	82	82		,,	,,	Clear A. M. do.
10	—·12	—·12	—·12	75	82	82		,,	,,	Clear A. M. do. high wind at night.
11	—·12	—·12	—·12	75	82	82		N. N. E.	,,	Cloudy A. M. cloudy and small rain all day and blowing fresh.
12	—·15	—·12	—·15	76	80	84	14	N. N. E.	,,	Cloudy A. M. high wind, small rain cloudy P. M.
13	—·15	—·20	—·15	78	80	84	2	N. E.	,,	Clear A. M. flying clouds.
14	—·15	—·15	—·15	79	82	82		,,	,,	Cloudy A. M. clear day, flying clouds.
15	—·15	—·15	—·15	78	82	82		,,	,,	Clear A. M. pleasant day.
16	—·15	—·15	—·15	77	82	82		,,	,,	Clear A. M. do.
17	—·15	—·15	—·15	78	82	82		,,	,,	Clear A. M.
18	—·15	—·15	—·15	78	82	82		,,	,,	Clear A. M.
19	—·15	—·15	—·15	78	83	82		,,	,,	Clear A. M.
20	—·15	—·15	—·15	78	83	82		,,	,,	Clear A. M.
21	—·15	—·15	—·15	78	84	82		,,	,,	Clear A. M.
22	—·15	—·17	—·15	78	82	82		,,	,,	Clear A. M.
23	—·15	—·16	—·15	75	81½	82		,,	,,	Clear A. M.
24	—·15	—·15	—·15	75	81½	82		,,	,,	Clear A. M.
25	—·15	—·18	—·18	75	82	82		,,	,,	Clear A. M.
26	—·18	—·20	—·18	75	82	82		,,	S.	Clear A. M. southerly wind now and then.
27	—·18	—·19	—·18	75	82	82		,,	S.	Clear A. M. do.
28	—·18	—·18	—·18	75	82	82		,,	S.	Clear A. M. do.
29	—·18	—·18	—·18	75	82	82		,,	S.	Clear A. M. do.
30	—·18	—·18	—·18	75	82	82		,,	N. E.	Clear A. M. do.
31	—·18	—·20	—·20	75	83	84		,,	N. E.	Clear A. M.

Barometer.	Inches.
Mean maximum	30·13
Mean minimum	30·13
General mean	30·13
Height from ground floor of Dispensary 2 feet 7½ inches.	

Thermometer	°
Mean maximum	81·74
Mean minimum	76·29
General mean	79·84
Mean daily range	5·58

	In. 20ths
Amount of rain	2
Number of days on which rain has fal.	5
len during the month	
Prevailing winds.	A. M. N. 2 27 N.
	3 S. 1.
	P. M. ,, 26 ,, 2
	,, 3.

The above Observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN FEBRUARY, 1842.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Thermometer inches from moon to moon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	30·20	30·20	30·20	78	84	84		N. E.	N. E.	Clear A. M.
2	20	20	20	78	84	84				Clear A. M.
3	20	20	20	78	86	85				Clear A. M. but morning foggy with much dew on the ground.
4	20	20	20	77	86	85				do.
5	15	15	15	75	82	84				Clear A. M.
6	15	15	15	75	82	84				do.
7	15	15	15	75	82	84				Clear A. M.
8	15	15	15	75	82	84				Clear A. M.
9	15	15	15	75	82	84				Clear A. M.
10	15	15	15	75	82	84				Clear A. M.
11	15	15	15	75	82	84				Clear A. M.
12	20	20	20	76	84	84				Clear A. M.
13	20	20	20	76	84	86				Clear A. M.
14	20	20	20	76	85	86		S. E.		Clear A. M.
15	15	15	10	76	82	81		N. E.		Clear A. M.
16	15	15	15	75	82	81				Clear A. M.
17	15	15	15	75	82	81				Clear A. M.
18	16	15	15	75	83	81				Clear A. M.
19	15	15	15	75	83	81				Clear A. M.
20	15	15	15	75	83	81				Clear A. M.
21	15	15	15	75	83	81				Clear A. M.
22	15	15	15	75	83	81				Clear A. M.
23	15	15	10	75	83	81				Clear A. M.
24	15	15	15	75	83	81				Clear A. M.
25	15	15	15	75	83	81				Clear A. M.
26	15	15	15	75	83	81				Clear A. M.
27	15	15	15	78	85	83				Clear A. M.
28	15	15	15	78	85	83				Clear A. M.

Barometer. Inches.
Mean maximum.....30·16
Mean minimum.....30·15
General mean.....30·16
Height from ground floor of the Dispensary 2 feet 7½ inches.

Thermometer. °
Mean maximum.....88·21
Mean minimum.....76·07
General mean.....80·78
Mean daily range.. 7·82

Amount of rain..... In. 20ths. 0 0
Number of days on which rain has fallen during the month. None.
Prevailing Winds. A. M. N. E. 27 S. E. 1. P. M. N. E. 23 S. 5

The above Observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS MADE AT MADRAS IN MARCH, 1842.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches, from noon to noon.	Wind. A. M.	P. M.	WEATHER.
1	30·10	30·10	30·10	75	85	83		E. Var.	S.	Clear A. M. foggy morning, dew.
2	—·10	—·10	—·10	76	85	83		E.	S.	Clear do. do. do. sea breeze.
3	—·10	—·10	—·10	77	86	84		E	S.	Clear do. do. do.
4	—·10	—·10	—·10	77	86	84		E.	E.	Clear do. do. do.
5	—·10	—·10	—·10	78	86	84		E.	S. E.	Clear do. do. do.
6	—·10	—·10	—·10	78	86	84		E.	S. E.	Clear do. do. do.
7	—·10	—·10	—·10	78	86	84		W.	S.	Clear do. do. do.
8	—·10	—·10	—·10	78	86	84		S. W.	S.	Clear do. do. do.
9	—·10	—·10	—·10	78	86	84		W.	S.	Clear do. do. do.
10	—·10	—·10	—·10	78	86	84		W.	S.	Clear do. do. do.
11	—·10	—·10	—·05	78	86	84		S. W.	S.	Clear do. do. do.
12	—·05	—·05	—·10	78	88	85		S. W.	S.	Clear do.
13	—·05	—·05	—·05	80	88	85		S. W.	S.	Clear do.
14	—·00	—·00	29·98	80	88	85		S. W.	S.	Clear do.
15	—·00	29·95	—·98	82	86	86		S. W.	S.	Clear do. day sultry, and night oppressive.
16	—·00	—·95	—·98	84	88	87		S. W.	S.	Clear do.
17	—·00	—·98	—·98	85	88	87		S. W.	S.	Clear do. strong southerly breeze.
18	—·10	30·00	30·00	85	88	85		W.	S.	Clear do.
19	—·10	—·10	—·10	84	88	85		W.	S.	Clear do.
20	—·10	—·10	—·00	84	87	85		W.	S.	Clear do. slight drizzling in forenoon.
21	—·05	—·00	29·98	84	88	87		W.	S.	Clear do. sultry day.
22	—·05	—·05	30·05	84	88	87		W.	S.	Clear do. night rather sultry.
23	—·10	—·10	—·10	84	88	87		W.	S. E.	Clear do.
24	—·07	—·10	—·10	83	87	86		W.	S. E.	Hazy do. pleasant day.
25	—·12	—·00	—·00	80	85	85	6	W.	S. E.	Heavy shower A. M. do.
26	—·10	—·05	—·05	82	85	85		W.	S. E.	Clear A. M. flying clouds.
27	—·10	—·10	—·10	83	85	85		W.	S. E.	Clear do. do.
28	—·10	—·10	—·10	82	85	85		W.	S. E.	Clear do.
29	—·10	—·10	—·10	82	85	85		W.	S. E.	Clear do.
30	—·10	—·10	—·10	81	85	85		W.	S. E.	Clear do.
31	—·05	—·10	—·10	81	85	85		W.	S. E.	Clear do.

The above observations were kept at the Fort Dispensary.

Barometer. Inches.
Mean maximum.....30·07
Mean minimum.....30·06
General mean.....30·06
Height from ground floor of the Dispensary 2 feet 7¼ inches.

Thermometer. °
Mean maximum...86·41
Mean minimum...80·61
General mean....84·00
Mean daily range. 5·58

In. 20ths
Amount of rain.... 6
Number of days on which rain has fallen during the month } 2
Prevailing winds. { A. M. W. 17 S. W. 8 S. 5 Var. 1. P. M. S. 19 S. E. 11 E. 1.

REGISTER OF METEOROLOGICAL OBSERVATIONS MADE AT MADRAS IN APRIL, 1842.

Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Thermometer in-ches, from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	30·05	30·05	30·05	81	85	85		S. W.	S	Clear A. M.
2	—·00	—·00	29·98	80	85	86			S	Clear do.
3	—·00	—·00	—·93	82	87	86			S	Clear do.
4	—·00	—·95	—·93	83	87	86			S	Clear do. sultry forenoon.
5	—·00	—·95	—·95	84	88	87			S	Clear do.
6	—·00	—·95	—·95	83	88	87			S	Clear do.
7	—·00	30·00	30·00	83	87	86			S	Clear do.
8	29·95	—·00	29·95	83	87	86			S	Clear do.
9	30·00	—·00	—·95	83	87	86			S	Clear do.
10	29·98	—·00	30·00	83	87	86			S	Clear do.
11	30·05	—·00	—·02	83	86	85			S	Clear do.
12	—·10	—·05	—·05	82	87	86			S	Clear and sultry A. M.
13	—·10	—·10	—·05	84	87	86			S	Clear A. M. sultry day.
14	—·10	—·10	—·05	84	87	86			S	Clear do. sultry forenoon.
15	—·10	—·10	—·10	84	87	86			S	Clear do.
16	—·10	—·10	—·10	84	87	86			S	Clear do.
17	—·07	—·05	—·05	84	87	86			S	Clear do.
18	—·05	—·05	29·97	84	87	86			S	Clear do.
19	—·07	—·05	—·97	84	87	86			S	Clear do.
20	—·05	29·97	—·97	85	87	86			S	Cloudy do.
21	—·00	—·00	—·95	85	87	86			S	Cloudy do.
22	29·95	—·00	—·95	85	87	86			S	Cloudy do.
23	—·97	—·97	—·97	84	87	86			S	Cloudy do.
24	30·00	30·00	30·01	84	86	86			S	Cloudy do.
25	—·00	—·05	29·97	84	86	85			S	Cloudy do.
26	—·05	—·05	—·95	84	85	86			S	Cloudy do. sultry day.
27	—·05	—·00	30·00	84	86	86			S	Hazy do.
28	—·05	—·00	29·95	84	86	85			S	Clear do.
29	—·00	—·00	—·95	83	86	85			S	Clear do.
30	—·97	—·95	—·92	84	86	85			S	Clear do.

Barometer. Inches.
Mean maximum ..... 30·02
Mean minimum ..... 29·99
General mean ..... 30·00
Height from ground floor of the Dispensary 2 feet 7½ inches.

Thermometer. °
Mean max. maximum ..... 86·63
Mean min. minimum ..... 53·43
General mean ..... 83·31
Mean daily range ..... 3·26

In. 20ths.
Amount of rain 0 0
Number of days on which rain has fallen during the month 0
Prevailing winds ..... } r.n. S.fW. 30. s. n. S.E.20E.10.

The above observations were kept at the Fort Dispensary.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN MAY, 1842.

Days.	Barometer inches. Sunrise.	12 to 2 P. M.	Sunset.	Thermometer degrees. Sunrise.	12 to 2 P. M.	Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	P. M.	WEATHER.
1	30·00	29·98	29·95	84	86	86		S. W.	S. E.	Clear A. M.
2	—·00	—·95	—·95	84	85	86		S. W.	S. E.	Hazy do. sea breeze.
3	—·00	—·95	—·95	85	86	87		S. W.	S. E.	Clear do.
4	—·00	—·95	—·92	85	85	84		S. W.	S. E.	Clear do.
5	—·00	—·95	—·92	85	86	85		S. W.	S. E.	Cloudy do. slight showers at 7½ A. M.
6	—·00	30·00	—·95	84	86	85		S. W.	S. E.	Hazy do.
7	29·97	29·95	—·97	84	86	85		S. W.	S. E.	Clear do. blowing rather fresh from the southward in the evening.
8	30·00	30·00	30·00	84	86	85		S. W.	S. E.	Clear do.
9	—·00	—·00	29·90	85	88	87		S. W.	S. E.	Clear do. oppressive day.
10	29·95	—·00	—·90	85	93	87		W.	E.	Clear do. oppressive day, land wind, sea breeze.
11	—·92	29·95	—·90	85	91	87		W.	S. E.	Clear do. sultry day do. do.
12	—·92	—·95	—·87	85	91	86		W.	S. E.	Clear do. do. do. do. do.
13	—·90	—·90	—·90	85	88	86		W.	E.	Clear do. do. do. do. do.
14	—·90	—·95	—·87	87	94	87		W.	E.	Hazy do. do. do. do. do.
15	—·87	—·90	—·87	87	95	87		W.	S. E.	Hazy do. do. do. do. do.
16	—·90	—·85	—·85	86	88	86		W.	S. E.	Clear do. sky over cast do. do.
17	—·90	—·90	—·90	84	87	86		W.	S. E.	Hazy do. cooler day.
18	—·97	—·97	—·97	84	87	86		W.	S. E.	Clear do.
19	—·97	30·00	—·97	85	87	86		W.	S. E.	Clear do. do. do.
20	30·00	—·00	30·00	85	91	86		W.	S. E.	Hazy do. sultry.
21	—·00	—·00	—·00	85	88	86		S. W.	S. E.	Hazy do. do. do. do.
22	—·00	—·00	—·00	85	93	86		W.	S. E.	Clear do. do. do. do.
23	29·95	29·95	29·95	85	90	86		S. W.	S. E.	Clear do. do. do. do.
24	—·95	—·95	—·80	86	90	87		S. W.	S. E.	Clear do.
25	—·95	—·95	—·90	86	88	88		S. W.	S. E.	Clear do. do. cloudy and lightning P. M.
26	—·93	—·95	—·95	86	89	88		S. W.	E.	Hazy do. very sultry.
27	—·90	—·92	—·85	87	95	90		W.	E. & W.	Clear do. cloudy P. M.
28	—·90	—·95	—·90	88	90	90		W.	E.	Cloudy do.
29	—·85	—·90	—·90	87	90	90		W.	E.	Cloudy do. sultry forenoon.
30	—·80	—·83	—·78	87	95	94		W.	W.	Cloudy do. oppressive day, windy, lightning at night.
31	—·80	—·80	—·78	89	95	93		W.	W.	Cloudy do. oppressive day, gusts of land wind all day and night.

The above Observations were kept at the Fort Dispensary.

Barometer.	Inches.
Mean maximum	29·94
Mean minimum	29·91
General mean	29·93
Height from ground floor of Dispensary 2 feet 7½ inches.	

Thermometer.	°.
Mean maximum	89·31
Mean minimum	85·45
General mean	87·26
Mean daily range	3·90

In. 20ths
Amount of rain 0 0
Number of days on which rain has fallen during the month 1
Prevailing winds. A. M. W. 14. S. W. 17 S. P. M. S. E. 22 E. 6 W. 2 variable 1.

REGISTER OF METEOROLOGICAL OBSERVATIONS, MADE AT MADRAS IN JUNE, 1812.

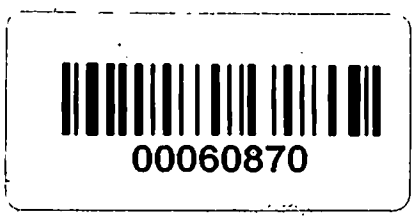
Days.	Barometer inches. Sunrise.	Barometer inches. 12 to 2 P. M.	Barometer inches. Sunset.	Thermometer degrees. Sunrise.	Thermometer degrees. 12 to 2 P. M.	Thermometer degrees. Sunset.	Pluviometer inches from noon to noon.	Wind. A. M.	Wind. P. M.	WEATHER.
1	29·75	29·77	29·77	88	95	97	None indicated during the month.	W.	W.	Hazy A. M. gusts of land wind and unpleasant day.
2	—·78	—·75	—·70	88	96	95		W.	W.	Hazy do. oppressive day and overpoweringly hot.
3	—·80	—·75	—·70	88	91	95		W.	ES&W.	Hazy do. sea breeze at noon only for half an hour, the land wind then returned, oppressively. Hurricane at Calcutta.
4	—·80	—·80	—·75	88	96	90		W.	S. S. E.	Hazy A. M. sea breeze at 4 P. M. [last night.
5	—·80	—·85	—·80	88	91	88		W.	S. E.	Clear do. day pleasanter, blowing rather fresh from the southward.shower
6	—·85	—·85	—·85	85	90	88		S.	S. E.	Clear do.
7	—·90	—·90	—·90	88	90	88		S.	S. E.	Clear do. rather sultry day.
8	—·90	—·90	—·90	86	95	88		W.	S. E.	Clear do. sea breeze.
9	—·90	—·90	—·90	86	91	87		W.	S. E.	Clear do. do.
10	—·95	—·90	—·90	87	91	87		W.	S. E.	Clear do.
11	30·00	30·00	30·00	86	91	87		W.	S. E.	Clear do. sea breeze, shower last night. [W. thunder and lightning.
12	—·00	—·00	—·00	86	91	86		W.	S. E.	Clear do. sky overcast in afternoon and looked threatening, wind from N.
13	—·00	29·95	—·95	84	90	86		W.	S. E.	Hazy do. cloudy P. M. lightning last night.
14	—·00	—·95	—·95	84	90	86		W.	S. E.	Clear do. sea breeze.
15	29·95	—·95	—·95	85	94	86		W.	S. E.	Clear do. do. shower last night.
16	—·95	—·95	—·90	85	87	86		W.	N. W.	Clear do. cloudy forenoon, slight shower, winds variable.
17	—·85	—·85	—·85	84	90	86		W.	S. E.	Cloudy do. drizzling in the day sultry and hazy.
18	—·90	—·90	—·85	85	92	88		W.	W.	Cloudy do. sultry day.
19	—·85	—·85	—·85	87	93	88		W.	W.	Clear do. slight shower about 6¼ P. M,
20	—·85	—·75	—·75	88	93	88		W.	W.	Clear do. winds variable.
21	—·90	—·90	—·85	88	93	90		W.	S. E.	Clear do. sea breeze, shower at 6½ P. M.
22	—·95	—·90	—·85	88	94	90		W.	S. E.	Clear do. do. oppressive night.
23	—·90	—·90	—·85	89	94	90		W.	S. E.	Clear do. do.
24	—·85	—·85	—·85	87	95	90		W.	S. E.	Clear do. do. shower last night.
25	—·85	—·85	—·85	85	88	88		W.	S. E.	Clear and pleasant A. M. sea breeze.
26	—·90	—·90	—·85	87	90	88		W.	S. E.	Clear A. M. sea breeze.
27	—·90	—·87	—·85	85	90	88		W.	S. E.	Clear do. do. lightning during the night.
28	—·90	—·90	—·85	85	90	88		W.	S. E.	Clear do. do.
29	—·95	—·90	—·90	87	87	88		W.	S. E.	Clear do. do. lightning last night.
30	—·95	—·90	—·90	86	88	88		W.	S. E.	Clear do.

Barometer. Inches.	
Mean maximum	29·89
Mean minimum	29·86
General mean	29·87
Height from ground floor of the Dispensary 2 feet 7¾ inches.	

Thermometer. °	
Mean maximum	91·53
Mean minimum	86·43
General mean	88·85
Mean daily range	5·33

Amount of rain	In. 2 0	00
Number of days on which rain has fallen during the month.	8	
Prevailing winds.	A. M. W. 2 S. 2. P. M. S.E.; 2 3 W. 5 N. W. 1, var. 1.	

The above Observations were kept at the Fort Dispensary.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